

# ATLANTIC FISHERMAN

OCTOBER  
1950



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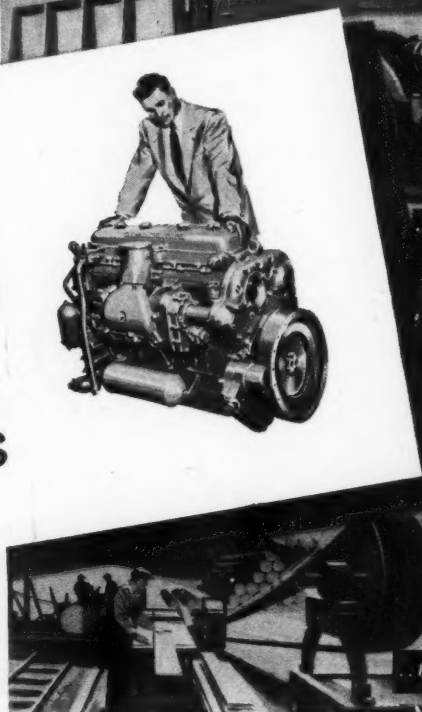
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So, too, have designers of all types of power-driven equipment turned to the GM "71" for low-cost efficient power. Today they are using it in heavy-duty trucks, tractors and earth movers, in work and pleasure boats, in cotton gins, lumber mills, oil rigs and for many other mobile, portable and stationary uses—with remarkably successful results!

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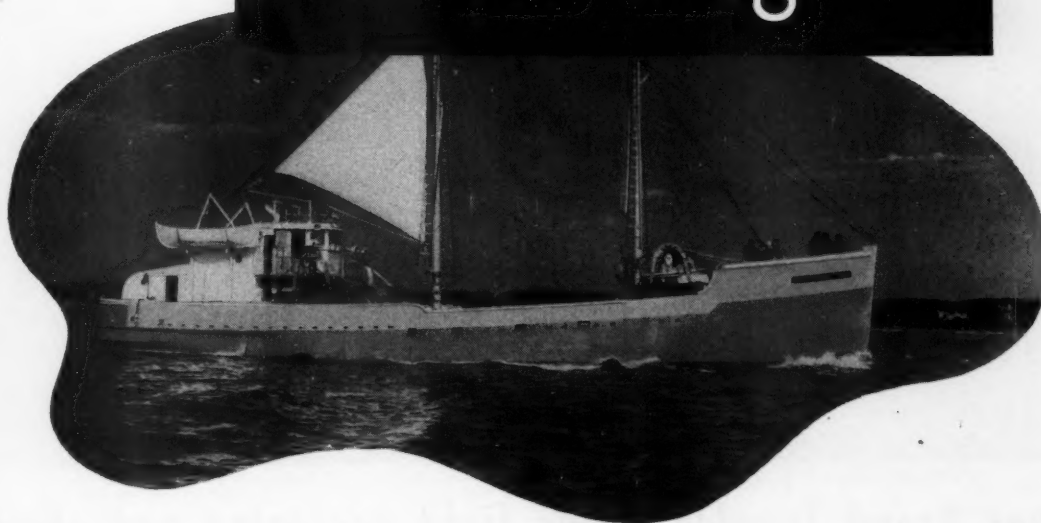
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less fixing



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**AMERICAN TIGER BRAND WIRE ROPE**

**UNITED STATES STEEL**



## Proper Handling of Fish on Boats Is First Requisite for Quality

The matter of quality is of paramount importance to the fishing industry. Because of the perishable nature of fish and shellfish, too much stress cannot be laid on taking every precaution to insure the marketing of prime-quality products.

Several foreign countries, notably Canada, Norway and Iceland, already have inaugurated fish-inspection services. The object of the Icelandic Fish Inspection Agency is to insure an article of the best possible quality, and to avert quality faults that might prejudice the sale of Icelandic fish in the foreign market.

Giving instructions on proper handling is the principal work of the Iceland inspection service. Whereas this is done mainly while fish are being processed, packed and frozen, attention also is given to the inspection of vessels, and handling of fish aboard. The following information regarding fishing vessels is quoted from the Chief Inspector in Iceland:

"Inspectors see that the holds of fishing vessels, as well as gratings and shelves in the holds, are so fitted as to facilitate their cleaning. In the bottom of the holds shall be close-barred gratings, so fashioned that the laths on which they rest are laid longways of the hold, in order that the flow of water down and aft may be unobstructed. Boats that during a fishing trip keep their catches on deck shall also have gratings on that part of the deck where the fish are kept.

"Holds of fishing boats must be carefully cleaned and scrubbed after each fishing trip. The inspector may even demand that a disinfectant be used, if deemed necessary.

"On boats that do not land their catches daily, all fish are to be gutted on board as soon as possible. Boats landing their catches daily need not necessarily gut the fish on board, though during the Summer season, it is desirable that fish be gutted directly after catching.

"All fish are to be washed as soon as they have been gutted. Great care is to be taken that no traces of liver, intestines, or blood remain in the abdominal cavity. Fish never must be hooked or pierced with forks or other implements, except in the head.

"Gutted fish must be put on ice in the hold, belly side down, before rigor mortis sets in. Inspectors shall determine the quantity of ice to be used for the icing of fish on boats, depending upon the season of the year and the equipment of the ship."

Considerable interest in the standardization of quality has been shown recently in this country. A bill on the establishment of standards for frozen fish was introduced at the last session of Congress, and some States have expressed interest in setting up standards for certain types of fishery products.

A current example of how the industry can be instrumental in inaugurating a quality control project is the plan of the new Texas Shrimp Association. One of its objectives is a quality control committee which will set up rules and regulations to follow in handling shrimp from the boat level through the packing plant.

Although the matter of quality has received attention from many individual fish concerns and by some local organizations, there still is an opportunity for additional cooperative effort in developing uniform standards of quality.

It would be highly desirable for the industry to take the initiative in establishing quality control programs in this country. While it might be advisable to collaborate with Government agencies in determining suitable standards, it would be well for the industry to supervise the operations of such programs.

In order to obtain full benefit from a quality control program, it is essential to have boats land top grade fish. That means that it would be up to the industry to get all fishermen to handle their catches properly. In so doing, the fishermen not only would assure themselves of the best prices, but also would help to expand the market for fish through increased consumer acceptance.

# ATLANTIC FISHERMAN

REGISTERED U. S. PATENT OFFICE

The Magazine for Fish and Shellfish Producers  
On Atlantic Coast, Gulf of Mexico, Great Lakes

VOL. XXXI

OCTOBER 1950

NO. 9

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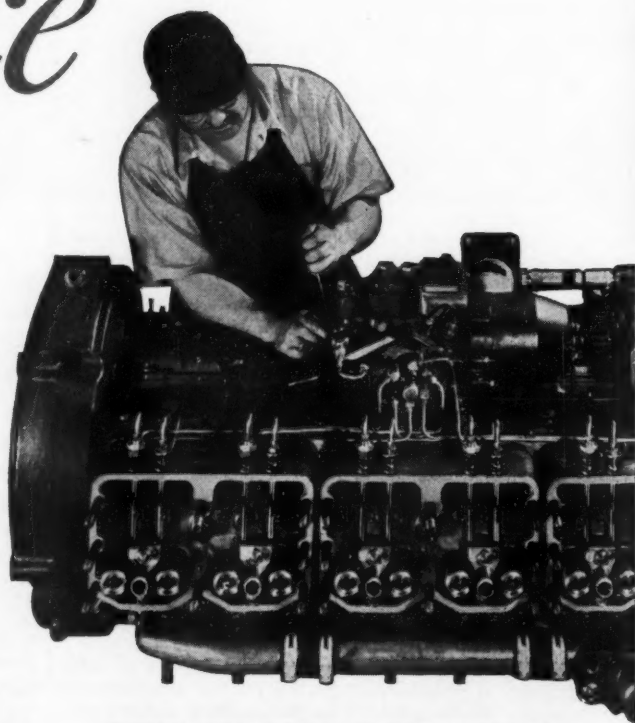
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► "The Magnetic Compass Pilot and electric steering equipment

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► THE STARCREST ranges from San Diego to the Galapagos Islands for

long periods of fishing under trying conditions in all weather. Sperry equipment provides Captain Dore and his crew with a "triple" steering system—automatic, electric follow-up and manual—for handling in all types of sea. This means faster and safer trips to and from fishing grounds . . . more profit per trip.

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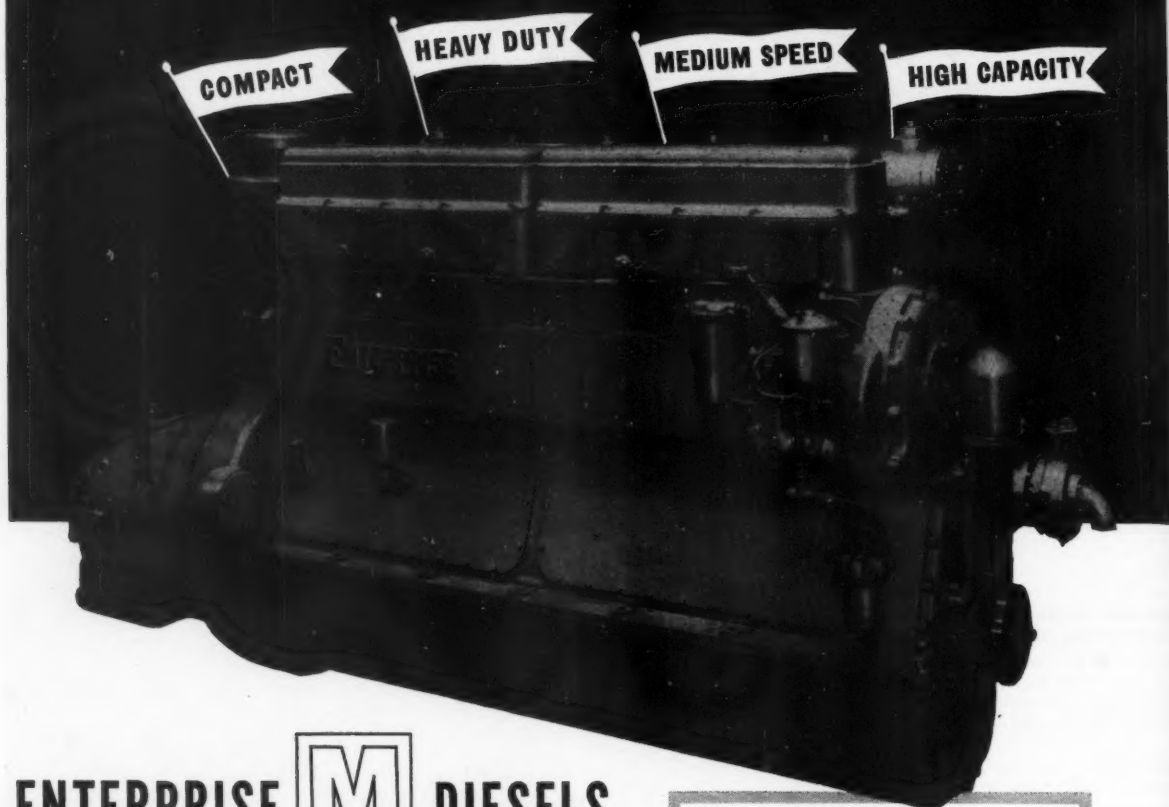
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# Sounding-Lead

**FISH PRICES UP** In general, prices of all fishery products rose from July to August. The edible fish and shellfish (fresh, frozen and canned) wholesale index for August was 105.6% of the 1947 average—8.3% higher than the previous month and 6.7% above August 1949, according to the Bureau of Labor Statistics of the Department of Labor. Sharp advances in all food prices, which started in July, continued during August as compared with the previous month, and edible fishery products followed the same trend.

Prices of items under the drawn, dressed, or whole fin-fish sub-group continued to rise, and August prices were 4.2% higher than for the previous month. Compared to July, yellow pike prices at New York City during August were considerably higher, while prices of all other items in this sub-group increased moderately in most cases, except for whitefish prices at New York City which declined slightly. In August, prices for this sub-group were still 15.1% higher than in August 1949.

Fresh processed fish and shellfish prices were 3.5% higher during August as compared with July and 8.3% higher than in August 1949. Among the individual items in this sub-group, only haddock fillets sold at lower prices during August.

August prices for the frozen processed fish and shellfish sub-group were 2.1% higher than in July and 9.6% higher than in August a year earlier.

Canned fish markets were even stronger during August than in July, probably influenced by the Korean conflict and the small pack of salmon to date. The August index for canned fish was 106.3% of the 1947 average—16.0% higher than July, but 0.4% below August 1949. Prices for all canned fish in this sub-group rose.

**NO. ATLANTIC TREATY BILL** President Truman signed the implementing legislation for the Northwest Atlantic Fisheries Treaty into law on September 27. The bill had been amended to provide that nothing in it shall be construed to limit or add to the authority of the individual States to exercise their existing sovereignty within "the presently defined limits of the territorial waters of the respective States".

The President now must name three United States commissioners to serve on the International Fisheries Commission, and they in turn have authority to name an advisory committee familiar with the fishing industry.

**NFI BY-PRODUCTS DIVISION** At a meeting of the National Fisheries Institute's Executive Committee in Chicago the latter part of September, Stanley Letson, chairman of the Fish Meal, Oil, and By-Products Committee, announced the appointment of Wayne M. Waller as director of the new Fish Meal, Oil, and By-Products Division of the Institute.

Mr. Waller, who will join the staff in Washington on November 1, has had wide experience in the fields of animal and poultry nutrition, research, sales, and promotion of feed concentrates, especially those of fish origin. He will work in conjunction with Ralph Holder, recently appointed technical consultant.

The establishment of the new Division is the culmination of much work and planning by the members of the fish meal and oil industry. Mr. Waller will direct a broad program which will assist the industry in merchandising its products to best advantage and promote their proper utilization by the manufacturers whom the industry serves. Also included in the program is a plan for cooperative research by the laboratories of the industry.

**SOCIAL SECURITY REVISIONS** The Act cited as the "Social Security Act Amendments of 1950" has been signed by the President and is now Public Law 734, 81st Congress. Some rela-

tively minor administrative features are already operative, but most of the more important ones affecting the fishing industry will go into effect on January 1, 1951.

The law will place self-employed persons in the fishing industry under the coverage of the old-age and survivors insurance system. For the first three years, a tax of 2¼% will be imposed on self-employment income, as defined in the law. It is estimated by the Fish & Wildlife Service's Economics and Marketing Section that about 36,000 self-employed fishermen will be covered under the amended law, invoking for the first year payments of about \$2,000,000 into the Social Security system by self-employed fishermen.

In addition, proprietors of fish processing, wholesaling, etc., establishments operated as individual businesses or partnerships will be subject to this tax. The Internal Revenue Bureau probably will handle the collection of the tax on self-employment income in conjunction with its income tax collection system.

The law also raises the maximum amount on which the old-age and survivors insurance tax is calculated for regular employees. From now on, up to \$3,600 annually will be taxed instead of up to \$3,000, as in the present law. This applies to all firms already making contributions on covered employees.

Fishermen employed on vessels under ten net tons (except if they are halibut or salmon vessels) are excluded from the old-age insurance system under the law, and no tax payments are required for them. However, fishermen owning these vessels and being self-employed, are covered by the law and are required to pay the tax on their self-employment income.

**FAO HERRING MEETING** The Food and Agriculture Organization Meeting on Herring Technology began at Bergen, Norway on September 24 and was concerned with technological problems related to the processing, marketing and distribution of herring.

One of the principal subjects up for discussion in this meeting was the possibility of preparing herring which is a cheap source of protein, as an inexpensive food product which might suit the tastes of protein-deficient populations in areas such as Asia and Africa.

The FAO meeting of Fisheries Technologists was convened on September 30, immediately following the Meeting on Herring Technology. The purpose of the second meeting was to consider the desirability of arranging for continued cooperation among fisheries technologists on a regional basis.

Harold E. Crowther, chief, Technological Section, Fish & Wildlife Service, and Herbert C. Davis, president, Terminal Island Sea Foods Ltd., Terminal Island, Calif., represented the United States Government as Delegate and Adviser.

**ANIMAL FOOD PACK** The pack of canned fishery products for animal food has increased from \$1,861,000 worth in 1940 to \$8,663,000 in 1949. The 1949 pack of 1,931,000 standard cases (48 one-pound cans) is an increase of 46% in volume and 24% in value over the previous year, and was the largest and most valuable pack in history. Over 46% of the production was canned in California, while the major portion of the remainder was packed in Maine and Massachusetts.

**EXPRESS RATE HEARINGS** The Interstate Commerce Commission hearing in the re-icing charge case, which had been set for September 25 in Chicago, has been postponed upon request of the Railway Express Agency until January 22, 1951, in Chicago. In this case, the Express Agency proposes to assess re-icing charges, ranging from 30c to \$2.70 on each package of iced fish and shellfish needing re-icing.

Also postponed is the hearing in the case which involves large rate increases on fish from the Great Lakes and the


(Continued on page 47)




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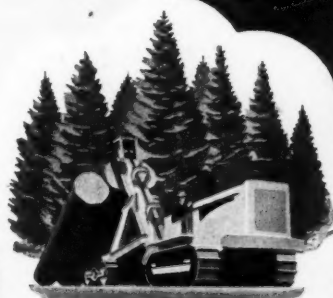
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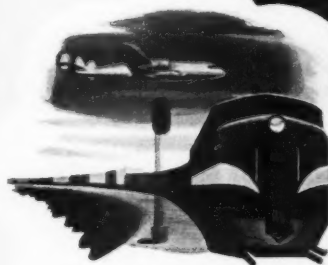
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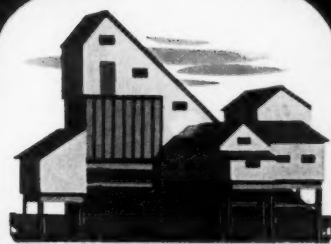
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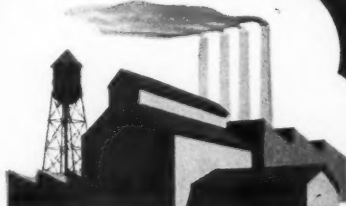
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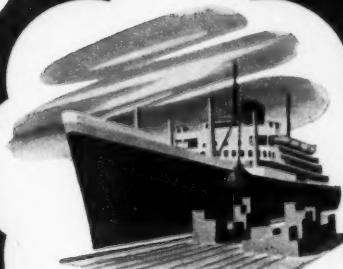
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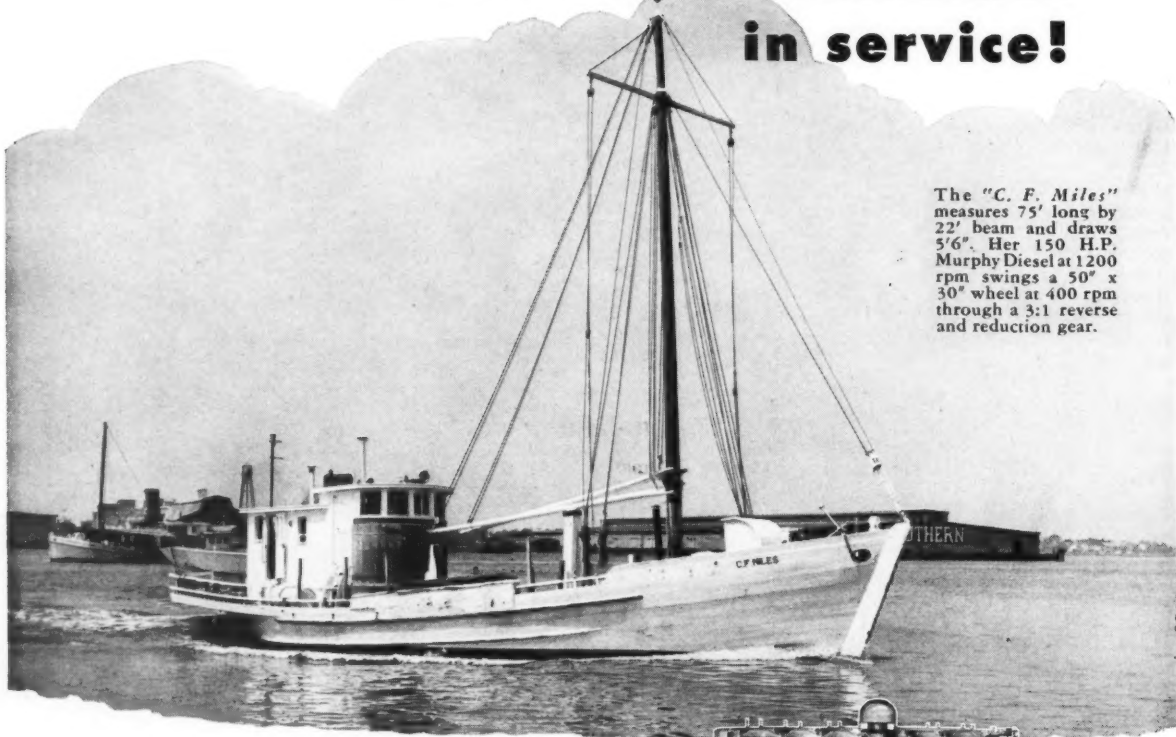
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4 E. Rockwell

# *Our best salesmen* are the **MURPHY DIESELS** in service!



The "C. F. Miles" measures 75' long by 22' beam and draws 5'6". Her 150 H.P. Murphy Diesel at 1200 rpm swings a 50" x 30" wheel at 400 rpm through a 3:1 reverse and reduction gear.

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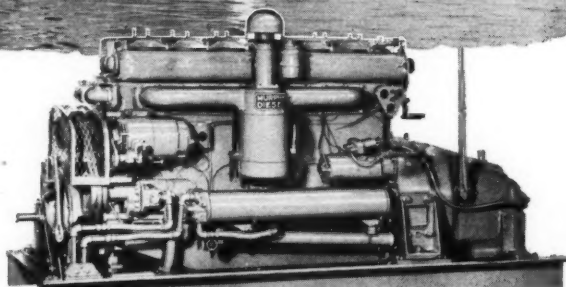
Before you power a new boat or repower an existing one ask other Murphy owners about their experience . . . and for full details on the Murphy Diesel ask your dealer or write for a copy of the booklet "10 Questions to Ask a Diesel Engine Salesman."

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# Releasing More Small Fish from Shrimp Trawls

North Carolina Tests Show Greater Escapement of Fish from Larger Mesh Nets without Noticeable Reduction in Size of Shrimp Hauls\*

**T**HE rapid development of the shrimp fishery in Pamlico Sound, North Carolina during recent years, accompanied by a general decline in catches of finfish other than menhaden, has resulted in a controversy regarding the relationship between the two industries. There have been, however, very few facts which could be used as a basis for sound appraisal of the reported destruction of small fish by the shrimp trawls.

During the Summer of 1949, the University of North Carolina's Institute of Fisheries Research at Morehead City made a study of the release of small fish and shrimp from a newly-developed webbing invented by Louis Guthrie of Morehead City and designed to retain shrimp and to release more fish than the type of webbing currently used in the industry. Two mesh sizes of standard webbing were used for comparison with it.

While gathering information on the escapement of fish from the three nets, data also were obtained regarding the kinds and amounts of finfish taken and the distribution and growth of small fish within Pamlico Sound during the Summer.

## Equipment Used

An 18' trawl, similar to the conventional shrimp trawl, was used during the earlier part of the study. It was found, however, that the catches with this net were small, and it was felt that larger catches would result if conditions for escape from the cod end more closely approximated those found in the commercial nets. The 18' net, therefore, was replaced by a 50' net. Of a total of 39 experimental tows, 15 were made with the small and 24 with the large net.

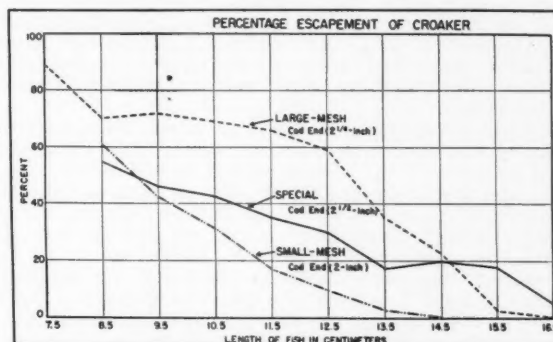
Three interchangeable cod ends were used in the study: (1) standard 2" stretched mesh; (2) standard 2½" stretched mesh; (3) a special cod end (the Guthrie net) made of 2½" webbing, 18-thread twine, but with three softer and longer twines tied in with the regular twine. The longer, soft twines were designed by the inventor to entangle the shrimp and prevent their escape, while the larger mesh size was intended to allow passage of small fish.

A cover bag, made of 1½" webbing and 21-thread twine, was sewed onto the belly of the net, four meshes ahead of the cod end. The cover bag was longer than the cod end and completely surrounded it so that fish or

\* Abstract of paper by Eugene W. Roelofs, chief, Finfish and Hydrobiological Investigations, Institute of Fisheries Research, University of North Carolina, Morehead City, N. C.



Emptying a netload of shrimp on the deck of a North Carolina shrimp boat.



Percentage escapement of croaker by size from 2½" special cod end and 2¼" and 2" standard cod ends.

shrimp passing through the meshes of the cod end would be caught in the cover bag.

The net was towed from the Institute's launch *Robert E. Coker*. Towing speed was about 3 knots, and the length of tows varied from one-half hour to slightly over one hour.

All of the tows were made in Pamlico Sound and the mouths of Pamlico and Neuse Rivers. No attempt was made to work in areas where shrimp were concentrated inasmuch as the study was primarily concerned with escapement of small fish. Shrimp were taken in all tows but in a smaller ratio to finfish than would have been taken by following the "schools" of shrimp throughout the Pamlico Sound area, as practiced by commercial shrimpers.

When the net was lifted, the contents of the cover bag and the cod end were discharged into separate compartments on deck. All fish and shrimp were measured in 0.5 centimeter intervals.

## Standard Large-Mesh Net Releases Most Fish

In the 39 experimental tows, 1,884 shrimp and 13,083 fish were taken. It was shown that the large-mesh (2¼") cod end releases more small fish and shrimp than does the special (2½") cod end; the latter, in turn, releases more than the 2" mesh. The number of sea trout taken in the various cod ends and cover bags was relatively small and percentage of escapement by size was not calculated.

The special net allowed greater escapement of the larger fish: spot over 12 centimeters (about 5") and croakers over 14 centimeters (about 6"). In other words, the size range of fish escaping from the special net was slightly larger than that of the 2¼" mesh net.

In some cases a few very small fish which passed through the cod end may have escaped from the cover bag, giving a lower percentage escapement than the actual one which could only be obtained by using a very small-mesh cover bag. When the net was lifted from the water, small fish of from 1 to 3", mostly anchovies, but including a few spot and croaker, were occasionally observed falling from the cover bag. However, it is believed that the cover bag retained all of the fish over 4" and that the data are reliable for larger size groups.

The percentage escapement of the various sizes of shrimp was similar to escapement of spot and croaker. The escapement of shrimp from the special net occupies a point about midway between the large and small-mesh nets. The critical size range is from 10.0 to 13.0 centimeters (3.9 to 5.1"). The large-mesh net allowed 16.3 percent of the 10.0 to 10.9-centimeter (75 to 100 count)

(Continued on page 34)



# Use of Loran as Navigational Aid

THE installation of Loran equipment aboard fishing craft is going ahead rapidly. The adoption of Loran by fishermen to locate exact fishing ground positions on the various banks has resulted in shorter and more profitable trips. The following material is abstracted from "Electronic Navigational Aids," prepared by United States Coast Guard.

The Loran system is a modern electronic aid to navigation by means of which navigators on or over the ocean can determine their position accurately and quickly, day or night, and under practically any condition of weather and sea. The name "Loran" was derived from the words "LONG RANGE Navigation," which describe in general terms the system's relative utility when compared to ranges of other electronic navigational aids. The effective range of Loran is as great as 1,400 nautical miles at night and 750 miles during the day. The accuracy obtained is comparable to that which may normally be expected from good celestial observations. Even though such precision is attained, the determination of position by Loran requires but 2 to 3 minutes' time.

The navigator can think of Loran merely as a method of determining lines of position. These Loran lines can be crossed with other Loran lines, sun lines, star lines, soundings, Radar ranges or bearings to provide fixes. Loran lines are fixed with respect to the earth's surface; their determination is not dependent upon the ship's compass, chronometer, or other mechanical or electronic devices. Loran shipboard equipment requires no special calibration and is not affected by the arrangement or disarrangement of shipboard antennas, cargo booms, ventilators, etc., as in the case of radio direction finders.

## Principles of Operation

Loran operates on the following principles: 1. Radio signals consisting of short pulses are transmitted from a pair of shore-based transmitting stations.

2. These signals are received aboard the ship by a Loran radio receiver.

3. The difference in times of arrival of the signals from the two radio stations is measured on a special Loran indicator.

4. This measured time - difference is utilized to determine directly from special tables or charts a line of position on the earth's surface.

5. Two lines of position, determined from two pairs of transmitting stations, are crossed to obtain a Loran fix.

Since radio signals travel at a constant speed, a direct relationship between time of travel and distance traveled exists. Thus, measurement of intervals of time is, in essence, a measurement of distance itself.

The radio signals which are transmitted by Loran stations are not continuous transmissions such as those of everyday commercial broadcasting stations, but are "pulse" signals, or short bursts of radio energy transmitted at regular intervals. The use of "pulse" signals permits the individual signals to be identified in order that time measurements can be made. This would not be possible if the transmissions were of a continuous character.

Because the basic Loran measurement evaluates the difference in the distances between the navigator and each of two fixed transmitting stations and not the individual distances themselves, there are many points at which the difference would be the same even though the distances varied widely. These points fall along a smooth curve (hyperbola) which is known as a Loran line of position. Therefore, when a navigator has obtained a Loran reading from a pair of transmitting stations he has determined that his true position lies at some point on a particular Loran line of position. By making Loran measurements on a second pair of stations, a second line of position has been identified and the navigator's true position of "fix" has been established at the point of intersection of the two lines.

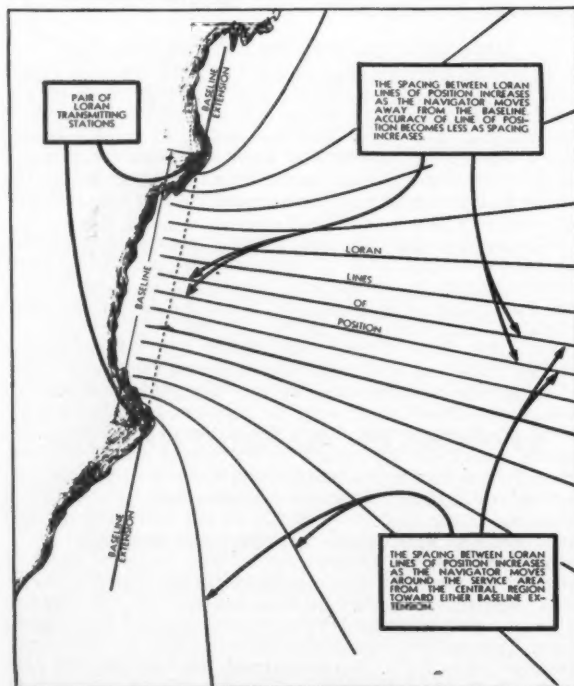
In order to simplify the navigator's problem of interpreting the Loran data in terms of coordinates of latitude and longitude, Loran charts are available which picture the electronic lines of position with respect to some convenient chart of the region in which the ship is sailing. The same information is available in the form of Loran tables for the convenience of navigators who desire to plot Loran lines of position directly on their regular navigators' chart.

## Equipment Used by the Navigator

The Loran equipment used by the navigator on shipboard-at sea in the determination of his position is known as a receiver-indicator. The receiver performs the functions of an ordinary radio receiver, but delivers its output to a visual indicator rather than to a loudspeaker, and is designed for the reception of pulsed signals rather than ordinary radio signals. The indicator is essentially an "electronic stop-watch" capable of measuring, in microseconds, the difference in times of arrival of the pulse



Capt. Allan J. Foote using Sperry Loran on the trawler "William J. O'Brien", owned by R. O'Brien Co. of Boston, Mass.



Loran hyperbolic pattern.

signals from the two stations of a pair. In the indicator, horizontal traces or lines of light on the screen of a cathode ray oscilloscope form the equivalent of the dial of a watch. A vibrating quartz crystal is the balance wheel, and electrical circuits known as "dividers" or "counters" take the place of gear wheels.

Installation of the receiving equipment is quite simple and can be performed in a few hours' time. Actually, installation merely requires simple mechanical mounting of the equipment to the deck or bulkhead, erection of an ordinary radio receiving-type vertical antenna, and plugging in the power cord to the local electrical power source.

### Operating Range and Accuracy

Three fundamental characteristics of Loran are of particular importance to navigators using the system. These qualities are the following:

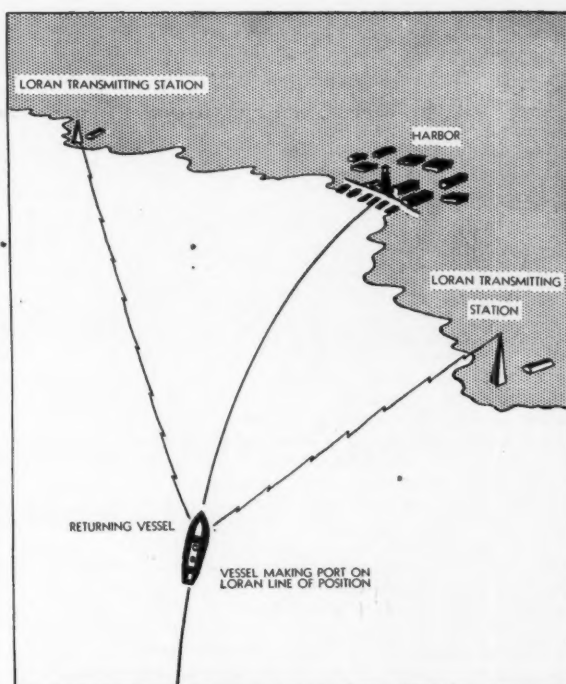
- (1) Practicability of Loran operation over longer distances than is possible with older types of radio navigational aids.
- (2) High order of positional accuracy attained.
- (3) Reliability of Loran under all kinds of weather conditions.

Vessels at sea may determine their position by means of Loran both day and night when they are within 750 nautical miles of the transmitting stations. This is based on the reception of "ground waves," which travel on the surface of the earth and are the most stable type of radio waves. At night, however, "sky waves" are received which are radio waves that travel outward from the transmitter until they "bounce" or are reflected from a region of the upper atmosphere known as the "ionosphere" and reach the navigator after reflection. The use of "sky waves" extends the range of Loran service at night up to a distance of 1,400 nautical miles from the transmitting stations. However, the positional data obtained by using "sky waves" Loran signals is somewhat less accurate than the information determined through the use of "ground waves," but, nevertheless, is still of a high order of accuracy.

One of the surprising facts about Loran is that in a matter of 2 to 3 minutes' time a navigator at sea can determine his position with an accuracy comparable to that obtained from good celestial observations, which require considerably longer to make and which entail somewhat laborious mathematical computations.

The accuracy of Loran fixes varies considerably, depending on the relative position of the navigator and the transmitting stations, the angle at which the Loran lines of position intersect and several other factors.

A very rough rule of thumb has been stated to be that a Loran line of position has an accuracy of better than 1 percent of the distance of the navigator from the stations; thus a navigator 1,000 miles away from the stations would expect the line of position to be well within 10 miles of the proper position. As the stations are approached, the accuracy increases greatly, and along the imaginary line between the two stations, or "base line", a line of posi-



Vessel making port on Loran line of position.

tion may have an accuracy of the order of several hundred feet. This feature has particular practical value, inasmuch as the physical arrangement of Loran stations is such that a navigator making a landfall usually will approach the shore in this highly accurate area of Loran service.

### Advantages Under Storm Conditions

Another important feature of Loran to the navigator is the reliability of the signals and the consequent removal of doubt in the navigator's mind as to the dependability of Loran fixes. Loran signals can be received under all ordinary conditions of storms, gales, and other severe weather. This is possible because the ordinary electrical interferences that accompany these conditions obscure the Loran signal for only a few seconds at a time and the navigator need only wait for a few moments to obtain usable data. For these reasons Loran is an especially valuable asset to navigation during bad weather.

Safety at sea is greatly increased through Loran, and in case of disaster, rescue operations are direct. A minimum of time is lost in searching for disabled vessels when the Loran position is included in the distress message. The increase in safety at sea will probably be reflected in reduced insurance premiums as the application of Loran becomes more widespread. This factor alone might easily compensate for the cost of the Loran equipment.

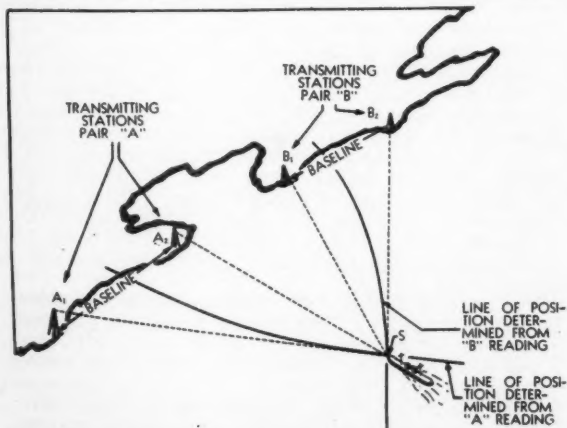
Loran has already played a prominent role in rescue operations. Distress at sea usually occurs during foul weather when determination of position by celestial observations has been impossible for several days. Under such limitations, the distressed vessel's dead reckoning position may be considerably in error.

### Control of Loran Transmissions

Since the value of the Loran system is equal only to the accuracy of timing of the signals transmitted, every precaution is taken to safeguard the functioning of the system. This is effective to such an extent that the navigator may feel certain that the Loran data which he obtains is correct. This fact has been proved by the acid test of completely successful Loran operation under the most severe conditions.

The nature of Loran transmitting station equipment makes it necessary for the Loran transmitting station

(Continued on page 42)



Navigator aboard Loran-equipped ship at S establishes "fix" by determining two lines of position, A and B by Loran measurements.

# Lake Erie Yield Affected by Plankton Supply

## Fluctuations in Fish Catch Caused by Changes In the Availability of Marine Food Organisms

**F**OR its size, Lake Erie's annual fish production is very high, averaging about one-third of the total catch for all of the Great Lakes. But great fluctuations in the yearly yields of various fish occur. Moreover, there are frequent but regularly occurring peak years of production for particular species of fish. The interval of years between peaks differs for different species, however. The years of highest production of some varieties may be years of lowest yield of others.

Without an extensive background of knowledge of habits of each fish species and environmental conditions under which each species lives throughout life, it is hard to understand this. Researchers already have obtained considerable information on breeding and feeding habits, growth rates and other activities of various fishes. Also, there are statistics on annual catches and gear employed.

But what actually causes peculiar variations in abundance remains a mystery. This is because sufficient research has not been undertaken on the various environmental factors under which fishes have been living.

The availability of an adequate amount of suitable food at various stages of the fishes' development seems to be the primary factor. This is the reason for research on plankton and the importance of influencing its production.

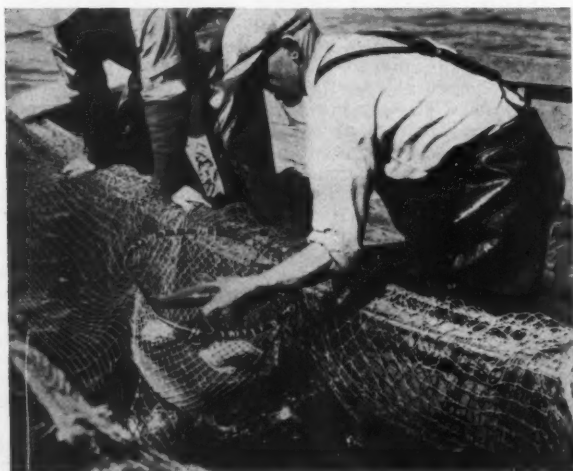
If some of the environmental factors, such as temperature or turbidity, happen to be responsible for a particularly large crop of a specific species of fish in any particular year, the data obtained by researchers on these factors together with what they have on plankton may provide the answer.

Lake Erie contains a wealthy abundance of plankton. Those greenish, sometimes brownish, microscopic plants upon which small marine life feed and the marine animals themselves are collectively called zooplankton but commonly referred to as merely plankton.

Thus plankton is a common, synonymous term for describing the two forms of minute marine and animal organisms referred to by fish scientists as zooplankton. Plankton is just as necessary to baby fishes as fertilizer is to a farmer's soil. It is the basic food without which fish will neither propagate nor grow.

### Laboratories Studying Plankton

For the past 12 years the Stone Laboratory, Put-In-Bay, Ohio, has investigated year-around abundance of plankton in shallow waters of western Lake Erie. Like studies,



Sorting fish being taken from a Great Lakes pound net.

although limited to Summer months, have been in progress since 1947 at Fisheries Research Laboratory, University of Western Ontario at Erieau.

The principal purpose of Fisheries Research Laboratory is to investigate lake plankton in the deeper central region of Lake Erie, and to coordinate results with those of the Stone Laboratory. No long-term studies of plankton, beyond Long Point in the deeper part of the lake, have been made before. Fish scientists believe this survey will prove highly beneficial to commercial fishing.

In the shallow western region, beyond Point Pelee, large quantities of plant plankton or *phytoplankton* are produced under the influence of sunlight and the rich nutrients carried in by the Detroit, Maumee and other rivers. These tiny plants, many smaller than 1/200th of an inch, are first foods of young fishes. They are also the food of abundant small animal organisms, collectively called the zooplankton, which are eaten in turn by fishes after the plant-eating stage.

Stone Laboratory has found immense seasonal and yearly differences in the kind and quantity of plankton produced around Base Islands. Water samples are taken at various depths from surface to bottom at several stations selected to represent a wide area. Some are collected by special traps which strain a known volume of water through bolting silk of 200 meshes per inch. The captured organisms are later identified and counted.

Some of them are too small to be retained by the silk filter. These are obtained by centrifuging water samples. Other samples of water are analyzed for dissolved gases and nutrient salts. Water temperatures and the amount of light penetrating to various depths are recorded as the plankton is taken. Many of the variations in plankton abundance and fish production are explained by these data.

For the central region of Lake Erie, from Point Pelee to Long Point, the Erieau laboratory uses similar methods. Winds and frequent rough water have necessitated modifications in collecting methods. The principal method to obtain samples of plankton from any desired depth up to 85 feet is the use of pumping apparatus. In moderately rough water where standard plankton traps are too fragile and inaccurate this method is highly satisfactory.

### Research Vessel Needed

The Erieau laboratory rents fishing tugs for transportation to and from collecting stations which extend for 28 miles southward of that port. A large, stable research vessel, however, is needed for full-scale observations during the entire open water season. Such a craft is, at present, the chief requirement to expedite the work.

Quantities of phytoplankton are usually less abundant in the central than in the western area of the lake. But zooplankton seems to be almost as abundant in Summer although the kinds of organisms differ in some respects.

One group of the zooplankton consists of small crustaceans commonly called "water fleas" (*Daphnia*), which are the principal food of ciscoes (herring). They are relatively large compared with many of the zooplankton organisms. And they can be captured in ordinary mosquito netting, while the more numerous, smaller animals pass through.

The large number of water fleas present in Summer can be demonstrated by lifting from bottom to surface a conical net of this material attached to a yard-iron ring a few miles off Erieau. A single lift through 60' of water usually produces a quart or more of tightly-packed marine insects (*Daphnia*). Water samples strained through fine bolting silk bring about 20 different species of zooplankton, frequently totalling more than 250 per gallon from mid-depths.





Line trawlers at Wilson's Beach, Campobello, New Brunswick.

## Efficiency of Lines versus Otter Trawls

### Canadian Studies Show Advantages of Each Method

**A** STUDY of the comparative efficiency of vessels in the capture of cod and haddock has been made possible through the plotting of the average catches of the four largest dory schooners and the four largest otter-trawlers carrying out continuous fresh fishing operations from Canada's Atlantic seaboard.

In a summary report on the Maritime Groundfish Investigation performed by the Atlantic Biological Station of the Fisheries Research Board of Canada, Dr. W. R. Martin points out that the introduction of new fishing methods has an important effect on the catch of fish. Canadian fishermen have depended largely on traditional line-fishing methods and as a result have lagged behind other countries in the exploitation of groundfish resources.

The section of the summary report dealing with fishing efficiency states it is of interest to contrast the groundfish catches of the Maritimes and the New England States. In the twenties, there was a major shift from line fishing to otter trawling in the New England States and catches of haddock, flounders and finally redfish increased sharply. The total groundfish catch rose from about 200 million lbs. in 1920 to about 400 million lbs. in 1940 while the groundfish catch of the Maritimes decreased from about 250 million lbs. to about 230 million lbs. during the same period. An important proportion of the increased New England landings was taken from Nova Scotia banks.

By measuring catches made with various fishing methods, an attempt is being made to assess the efficiency of each method and the potentialities of effecting an increased total through improved fishing efficiency.

#### Record of Trips Kept

Detailed records of each offshore fishing trip gives the Fisheries Research Board valuable information on abundance and fishing efficiency. A back log of trip reports collected by the Department of Fisheries has been useful in building up the long-term picture of offshore fishing.

The plotting of average catches show the relative catches of otter trawlers and schooners differ from year to year. When haddock was abundant in the thirties otter trawling proved to be an effective fishing method but when cod were abundant during war years line-fishing vessels, in general, made better total catches. In some years fish are abundant on the smoother grounds on the tops of the fishing banks while in others the fish are more readily available on the deeper and rougher parts of the banks.

Since otter trawling is restricted to the smoother fishing grounds and line fishing is less restricted by bottom type, otter trawl catches are more variable than those of schooners. In comparison with otter trawling, dory

fishing is an efficient fishing method on grounds adjacent to the Maritimes. The lower capital cost and lower operating expenses in schooner fishing, together with the high efficiency of this method, particularly in fishing salt cod, suggests that the dory method will not be replaced quickly by otter trawlers.

#### Long-Lining Tested

A major part of the groundfish investigation is concerned with the measurement of catches made with methods which are new to the Maritimes. The west coast long-lining method was studied by the construction and operation of the long-liner *J. J. Cowie* (49 gross tons) and the purchase of four small gurdies which were operated by inshore fishermen in various parts of the Maritimes. The experiments showed that the use of a gurdy reduced effort and permitted the handling of more gear and thus more fish. Power hauling was shown to be particularly useful in hauling heavy gear and large fish from deep water. This work stimulated the development of power hauling of line trawls by inshore fishermen in the Maritimes and power haulers of various types are now common in south western Nova Scotia.

During the past two years, the *J. J. Cowie* has been used for Danish-type seining experiments. The method is clearly efficient for the capture of flounders. However, it must be remembered that the value of Danish seines is strictly limited since the use of this gear is restricted to smooth bottom and such grounds are not common in the Maritimes.

Bait experiments in the hake fishery during the summer of 1949 at Souris, P. E. I., showed that squid and mackerel, although expensive, yielded a greater net profit than the cheaper baits which are available locally.

The development of a variety of fishing methods is essential if groundfish resources are to be exploited more fully. Many of the groundfish species with small mouths (redfish, witch, yellowtail and winter flounder) are not available to line fishermen and other methods of capture must be used for these species.

In the measurement of the groundfish catches of the Maritimes, the groundfish investigation has been concerned with measurements of species, area and season of total catch, landed value, fishing efficiency, new concentrations of fish, abundance, migrations, growth, recruitment and mortalities. All these measurements are considered to be of importance in determining the potentialities for increasing the groundfish catch of the future. About half of the effort of the investigation is spent on a study of fishing efficiency and exploration, and the other half in the statistics for the measurement of the abundance and the factors controlling abundance.

# Scallops Are Valuable Maine Resource

By Walter R. Welch\*

**F**AR from being merely a business that is supplemental to Summer lobstering, the Maine scallop fishery is one of the State's important sources of income for fishermen. In 1949, over 500,000 pounds of scallops were landed in Maine, and sold at about \$0.35 per pound.

The sea scallop fishery in Maine is believed to have started in the town of Mt. Desert on Mt. Desert Island in 1884. The principal dredging grounds were soon extended to include the area between the Sheepscot River and Mt. Desert Island. The dredging gear in use at the time was very light, consisting generally of oyster dredges or various modifications, attached by rope and moved by either hand or sail, so the more shallow beds, down to six or eight fathoms, were preferred.

The scalloping season at this early period depended chiefly upon the proximity of the market. When there was a good local demand, the fishing continued all year. When only the distant markets were available, the season depended upon the cold weather which furnished protection for the shipments. The principal market at this time was Boston, with smaller amounts going to Maine cities and to New York and Philadelphia.

During this period, the existence of beds in deeper water was known, and the need for improved gear for fishing them was recognized. The United States Fish Commission had demonstrated that a beam trawl was the most successful type of gear, except that smooth bottom was required to prevent tearing the net.

## Type of Gear and Methods Used

The present fishery takes place during an open season from November through March and furnishes valuable supplementary income for the many lobster fishermen who do not continue their work through the Winter months. Maine has scallop beds along the major part of its coastline, but those of principal production occur from Penobscot Bay eastward. Considerable advances have been made in the type of gear and methods used. The majority of vessels are in the 30- to 40-foot class and have been converted from lobstering to scalloping by the installation of winch, mast and hoisting gear.

Much heavier dredges are now in use. One of the two principal types employed has a mouth six feet wide, preferred for muddy bottom, and the other is made up of two dredges, each with a three-foot mouth, attached side by side to the same yoke, and preferred for rocky bottom. The bag of a dredge has an iron ring mesh on the bottom, and a twine mesh above.

Towing is done by means of wire cable running to the winch on deck. With the use of this gear, beds down to 50 fathoms are easily fished. Tows of up to a mile are made, depending upon the character of the bottom and the abundance of scallops. The dredge is hauled up, its load dumped on deck, sorted, and the scallop meats shucked out while the next tow is being made. Most trips are of only one day's duration.

## Characteristics of the Sea Scallop

The sea scallop is one of two principal commercial scallops found on the Atlantic coast. It may be distinguished from the bay scallop by its larger size, its lack of prominent fluting upon the valves, its possession of separate sexes, and especially, by the differences in bathymetric and geographic ranges, since the bay scallop is more restricted to shallow, inshore waters from southern Maine southward.

This larger mollusk grows to a diameter of about 8 inches, but most marketable catches average 4½ inches. The shell is rounded in outline and strongly flattened, the valve upon which the animal rests being much flatter

\* Fishery Research Biologist, Clam Investigations, U. S. Fish & Wildlife Service, Boothbay Harbor, Me., who presented this paper at the recent Oyster Convention in Atlantic City, N. J.



At recent conference of United States and Canadian biologists on clam and scallop problems in Department of Sea and Shore Fisheries Station, Boothbay Harbor, Me. Left to right, front row: Walter Welch, author of the accompanying article and Harlan Spear of Fish & Wildlife Service Clam Investigations. Standing: John Glud, FGWS; Stuart MacPhail, Atlantic Biological Station, St. Andrews, N. B.; Richard Tiller, FGWS; Carl Medcof, Atlantic Biological Station.

than the upper one. The valves are rather light, lending themselves to the swimming ability of the mollusk.

A live scallop, lying relaxed, with its valves slightly open, shows two rows of eyes around the margin of the shell, one row on each mantle edge. Each eye is perfectly formed and constitutes a rare structure among most bivalves, but does not seem to perform any important sensory function of the animal.

One of the most prominent features of the internal anatomy of the scallop is the adductor muscle, stretching from valve to valve. This muscle is the "meat" to the fishermen and the "scallop" to the market. It is made up of two distinct parts, the larger of which is adapted for rapid contractions and aids in swimming, while the other, smaller, portion is adapted to slower and more forceful actions, such as holding the valves closed when danger threatens.

## Early Stages of Bivalve Are Free-Swimming

A scallop begins its life in August or September, when the spawning season occurs. As in the case of many other mollusks, fertilization takes place in the water, when ova and sperm, released from separate individuals, meet and unite. The early stage of the scallop is free-swimming until sufficient size and shell growth are attained to cause it to settle to the bottom. Once settled, it attaches itself to rocks or shells by means of thread-like glandular secretions. It remains so attached for a rather indefinite period, generally over a year.

Feeding upon microscopic plankton forms and living at depths of more or less constantly low temperatures, the mollusk reaches a diameter of 2½ inches during its third Summer. A few individuals may reproduce at this time, but most sexual maturing occurs at four years of age, when a diameter of 3¼ inches has been reached.

Up to this time, the scallop is very active and moves about at the slightest provocation. The swimming action is accomplished by opening and closing the valves in rapid succession. The water, taken in by the opening of the valves, is forced out by their closing, and its direction of flow is controlled by the muscular free edges of the mantle. Older scallops are much less active and accumulate heavy growths of various fouling organisms. Indi-

(Continued on page 33)

## No. Carolina Has Heavy Oyster Set on Planted Shells

Dr. A. F. Chestnut, shellfish specialist with the Institute of Fisheries Research, Morehead City, reported recently that an extremely heavy oyster set has been obtained on shells planted in May and June of 1949.

In the near future each fisherman or oysterman buying a license will receive charts showing the location of State-seeded oyster beds where only hook-and-line fishing and pound nets will be permitted.

These beds, where shells were planted this year, are now protected under a regulation adopted by the State Commercial Fisheries Committee in August. The beds are located in Pamlico, Carteret, Hyde and Brunswick Counties.

### Larger Mullet Catches Expected

The first chill winds of Fall, known as the mullet shift, were expected to bring tons of mullet to fishermen along the North Carolina Coast.

The cold snap last month brought mullet to the nets of fishermen working inside waters, but strong winds prevented extensive operations on Atlantic Beach.

### Atlantic-Beaufort-Morehead Catch Gains

During the month of August, seafood production in the Atlantic-Beaufort-Morehead City area of North Carolina amounted to 653,700 lbs., which was nearly double the catch in the same month of last year. Over 80% of the yield was made up of finfish, and croaker was the top variety, with 219,800 lbs. The shellfish take consisted entirely of shrimp, and amounted to 106,400 lbs.

Landings for the first eight months dropped from 2,914,900 lbs. in 1949 to 2,272,100 lbs. this year.

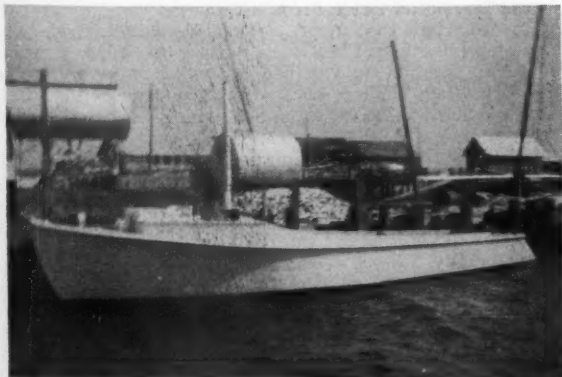
The shrimp catch in the major shrimp fishing areas of North Carolina, including the Atlantic-Beaufort-Morehead City section as well as several other localities, dropped to 577,000 lbs. in August from 1,353,600 lbs. in the same month of last year.

### Fishermen's Chanteys Recorded and Broadcast

Capt. Roy Goodwin of Lennoxville, recently fishing in New Jersey aboard the *Barnegat*, had with him some engineers who were observing the operation of the depth recorder on his boat. When a menhaden run was discovered the crew jumped to the task of pulling in the long drag nets, and at the same time started singing.

One of the engineers with a musical ear sensed something different about their song, and upon his return to New York convinced music critics and NBC radio men that he had discovered something new.

Tape recorders were secured and the radio men went aboard the *Barnegat* and recorded several of the sea chanteys they heard, with the result that the recordings were put together into a coast-to-coast program which was received with wide acclaim.



Fred T. Guthrie's 38' "Doris" of Belhaven, N. C., which is used for fishing, shrimping, crabbing, and freighting of crabs. The vessel uses Columbian rope and Linen Thread Co. Gold Medal nets.

The "Charles Redding Jr.", one of the boats that shrimped in the new beds off the Alabama and Mississippi coast this Summer. Hailing from Mobile, she is owned by Capt. James M. Collier of Theodore, Ala., and equipped with 65 hp. Caterpillar Diesel and Roebbing wire rope. This has been the best year for the boat, which is a year-round shrimper, getting her biggest catches from June to September.



## Gulf Shrimp Catch Shows Gain of More Than Half

A gain of over 60% was shown in the shrimp landings for the principal production areas in Alabama, Mississippi, Louisiana and Texas during the first eight months of this year, as compared to the catch for the same period of 1949. Landings were 258,000 bbls. this year.

Shrimp production amounted to 61,200 bbls. in August, up from 52,800 bbls. in the same month of 1949. Nearly half of the catch, 29,200 bbls., was landed in Louisiana, with the New Orleans and Lower Mississippi River region's 16,800-bbl. take leading the various areas in that State. Texas production of 16,400 bbls. was next, and the Port Isabel-Brownsville area topped all others in the State, with 10,000 bbls.

The 535,000-bbl. oyster yield for the first eight months of 1950 was about 50,000 bbls. less than during the same period of last year. Louisiana was the heaviest producer of oysters, with 357,100 bbls., followed by Mississippi, with 118,400 bbls.

Totaling 3,700 bbls., the oyster take for August was approximately 700 bbls. more than that of August, 1949. Louisiana produced all of the oysters except for 16 bbls. landed in the Mobile-Bayou La Batre, Ala. area. The entire yield was sold fresh or frozen, with no oysters being canned.

The hard crab catch for August amounted to 933,000 lbs., compared to 1,032,200 lbs. in the same month last year. Leading all other sections by a wide margin was the Morgan City-Berwick-Patterson area, with 582,200 lbs.

Crab production for the eight-month period also dropped, from 6,567,200 lbs. last year to 4,991,500 lbs. in 1950.

### Shrimp Pack Ahead of Last Year

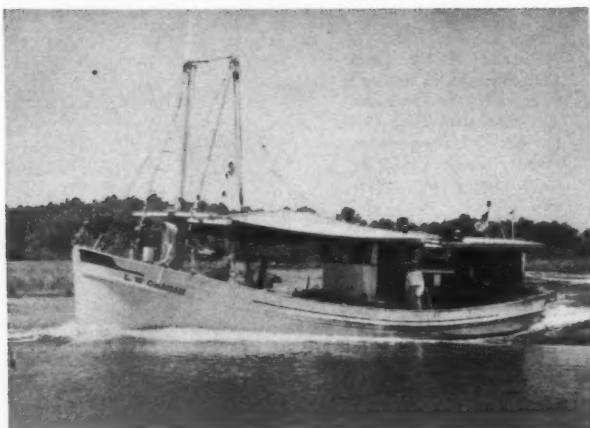
While edging slightly ahead of last year, the Gulf shrimp pack for the new season is still so small relatively that the price structure stays strong. The run to Sept. 16 amounted to 225,340 cases, compared with 219,442 a year ago. The pack for the week ended Sept. 23 was expected to tell the story, as a period of heavy production normally takes place at this time.

## Louisiana Fisheries Studied by Scientists

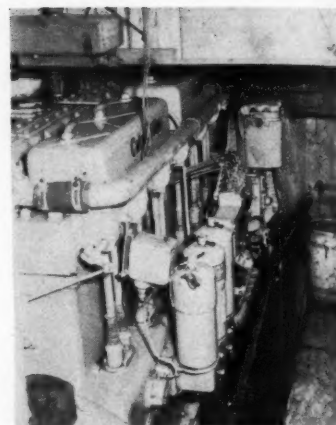
Scientists of Brazil and the Philippines recently spent a number of days in the New Orleans, La. area studying methods employed in the storage and distribution of fish and other marine products.

The trio conferred with Ernest S. Clements, Commissioner of the Wild Life and Fisheries Department. Then, in the company of Dr. James Nelson Gowanloch, chief





Graham Sea Food Company's 57' shrimp "L. W. Graham" of Slidell, La. Right, her D13000, 120 hp. Caterpillar Diesel which turns a 42 x 32 propeller.



biologist of the Department, they flew to the mouth of the Mississippi River to observe work being done there by the Department.

The visitors praised the modern methods being employed in the Gulf Coast area in the catching, storing and distribution of fish, oysters and shrimp.

#### Good Shrimp Catch

An exceptionally good shrimp catch for this season was made last month by Capt. Robert Wiggins and crew aboard the *Venture*. Their haul amounted to 32 1/5 bbls., delivered to the boat's owner, Versaggi Shrimp Co. of Patterson, La.

#### Ramos Establishes Branch at Louisa

Joe Ramos, head of the Ramos Shrimp Co., Patterson, La., has expanded his business to include a branch plant at Louisa, La. Located on the Intracoastal Canal between Cote Blanche Bay and Vermilion Bay, the site provides easy access to the Gulf for deep-sea trawling and at the same time is ideal for one-day trips in inside waters.

The new fish house is 30' by 50' and completely equipped. Junius Richard of Patterson is in charge of the plant, which has been in operation now since August 15. A number of boats already are supplying catches to the new branch, but there soon will be a fleet of 15 trawlers unloading there, most of them owned by Joe Ramos or the Ramos Brothers.

Among them will be five of the new-type, all-steel 38' trawlers designed and constructed by Sewart Machine Works in Berwick. One of the vessels, the *Blue Fish*, is already in use. The second trawler hit the water on September 5, and Brady Engine Co. of Berwick, installed a General Motors engine in it.

Mr. Ramos has ordered another General Motors engine from the Brady Engine Co., and plans to have a sixth 38' trawler built at the Sewart Machine Works.

#### Conrad Building Shrimpers for Kovac, Galloway

Conrad Industries of Morgan City, La. has started work on two 65' shrimp trawlers, one for Steve Kovac, who has ordered a D13000 Caterpillar Diesel for his boat, and the other for Alvah Galloway.

Vernon Boynt and Earl Webster also are having 65' shrimp trawlers built at the Conrad shipyard.

#### New Engine for Shrimp Boat

John Boudreaux of Bayou Dularge recently bought from the Boyce-Harvey Machinery Co. in Berwick, La. a D315 Caterpillar engine for his small shrimp boat.

#### East-West Canal Toll Charge Ends

Fishermen of the Lafourche-Coquille sections were rejoicing last month over the end of toll-payment for use of the East-West Canal, recently purchased by the State. The saving to each fisherman is expected to amount to \$150 a year.

The short end of the canal connects Bayou Lafourche and Bayou Terrebonne. It is about two and a half miles long. The seven-mile longer stretch connects Bayou Lafourche and Bayou Coquille.

#### New Menhaden Plants

Quinn Menhaden Fisheries of Louisiana, Inc., Empire, La., plans to build a new plant which will employ 250 workers. Empire Menhaden Co., Inc., Empire, La., will build a new plant to employ 150 workers.

#### Miss. Shrimp Prices Remain the Same

Members of the Gulf Coast Shrimpers' and Oystermen's Association met at Biloxi, Miss. on September 19 to discuss the price of shrimp. The scale will remain as in the past: 1 to 20 white shrimp to the pound, \$55 a barrel delivered; 1 to 30 brown and white, \$45 delivered; 30 to 40 white and brown, \$35.

#### Biloxi Shrimper Sinks

A two-man crew escaped when the shrimp boat *Antonio Margaret* sank in the channel between Biloxi, Miss. and Deer Island early last month.

The 55-footer, owned by Mavar Shrimp & Oyster Co., struck a submerged channel marker about 300 yards east of the Mavar plant and went down almost immediately. The Mavar Co. has started salvaging procedures.

#### Unusually Large Shrimp Caught

An 11" shrimp, weighing 5 oz. was landed at the DeJean factory in Biloxi, Miss. last month. A 10", 4 1/2 oz. shrimp was caught in a trawl a week previous by Martin Fountain.

#### Alabama Oyster Season Opens

The open season for the taking of oysters from Alabama's coastal waters began September 1, and will close at such future date as shall be set by the Director of Conservation.

State Seafood Inspector Sydney Landry said last month that good shrimping was resulting in low oyster takes in the Bayou La Batre area.

He reported that most fishermen were sticking to shrimping because of heavy catches, but that the majority of them planned to turn to oystering later in cooler weather when shrimp become scarcer inshore. At that time, oysters will be fatter and the market demand should be greater.

#### Catfish Trapping Stopped

Alabama's \$500,000 catfish business now has its back to the wall as the result of an order by the State Conservation Board which would stop trapping the fish with slabboxes. This is about the only way they can be taken commercially.

#### Government Pays for Destroyed Oyster Beds

President Truman signed a bill recently to pay W. F. Steiner of Bayou La Batre, Ala. \$3500 for the destruction of his oyster beds in Oyster Bay, Ala.

Materials dredged by the Army engineers from the cut-off between Oyster and Bon Secour Bays covered the beds and killed the oysters, in addition to making the beds worthless for replanting.

## Great Lakes Fish Landings Up Above During September

During September Lake Superior commercial fishing fleets generally got good yields of lake trout; but the lake, at times, was quite rough. Fishermen made catches of several hundred pounds more fish than they did during the same period last year. Trout this year are averaging about 9 lbs. each.

Grand Marais, Mich. fishermen report fewer lamprey scars on trout, and say that the scars appear to be fully healed in practically all instances. The cold Summer with Lake Superior waters below normal in temperature may have caused lampreys to avoid the Lake.

In the western region of Lake Superior commercial fishermen made some nice hauls of Northern pike.

### Lake Michigan Chub and Perch Catches Good

Lake Michigan yields during September showed improvement, with nice catches of chub and perch and fairly good whitefish yields reported. Some lake trout takes were reported in middle and Northern areas of the Lake.

Green Bay fishermen during September reported good yields of mixed fish, including walleyes, chub, perch and suckers, and catches of whitefish were fairly good. Although trout catches are still light, yields indicate some improvement over last year during the same period. The sea lamprey is still playing havoc with fish in Green Bay waters. In many instances where lampreys are taken clinging to fish, the creatures are smaller in size than they were last year.

### Lake Erie Pike Production Large

Fish production from Lake Erie during September was on the increase. Good yields of all species of pike were reported, and takes of sheephead and whitefish were improved. In the western region of the Lake, perch yields were heavy. Herring appeared to be widely scattered, and although some nice yields were made, herring takes generally were not up to expectations. Lake trout yields also were below average.

### Whitefish Invade Georgian Bay in Lake Huron

Lake Huron fishermen made fairly good yields of rough and mixed fish during September. Incredibly large catches of whitefish were taken from northern Georgian Bay waters of Lake Huron recently. One veteran fisherman was of the opinion that the weather had something to do with it; that whitefish invaded the unusually shallow water of Georgian Bay this Summer and Fall because waters, generally, were abnormally cold.

Catches of blue pike, sauger pike, yellow pike and perch yields from Saginaw Bay in the southern area of Lake Huron ranged from fair to good. Catches of rough fish were substantial, and a lot of mullet were taken.

### Wisconsin Fish Producers Hold Elections

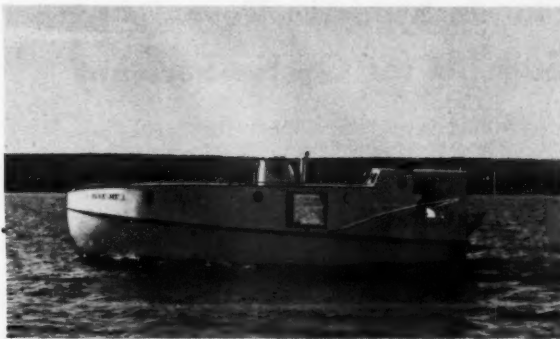
Elections of district officers, who will head their organizations for two years, were held recently in the various fish producing areas by the Wisconsin Fish Producers Association.

Kenosha and Racine named Ray McDonald for the office of president, and also representative on the State board of directors. Charles Wood, Racine, was named vice-president. Herman Freitag, Kenosha, was named secretary-treasurer.

Milwaukee re-elected Lelond LaFond, Milwaukee, president and board member; Frank Miller, vice-president; and Al Mucha, secretary-treasurer.

Two Rivers fishermen re-elected Nelson LeClair, Two Rivers, president; Harvey Stokdyke, Oshtburg, vice-president; and Ray Taddy and Everett LaFond, Two Rivers, secretary-treasurer and board member respectively.

Washington Island named Dan McDonald again for president; Rupert Johnson, vice-president; Everett Ellefson, secretary-treasurer; and Oliver Bjarnason, representative to the State board of directors.



The 35' all-welded steel fish tug "Blue Jay", owned by Tim Lukkonen of Duluth, Minn., and powered by a Chrysler Crown engine which turns a 24 x 18 Columbian propeller. Built by Marinette Marine Corp. of Marinette, Wis., the boat has a Crossley net-lifter. During the Summer months she is used for trolling.

### Research Vessel Contract Awarded

The contract for the new 60' fishing-tug type craft to serve as a research and laboratory vessel for the U. S. Fish & Wildlife Service's Great Lakes Fishery Investigations, was awarded to the Peterson Boat Works of Sturgeon Bay, Wis. recently.

The craft will be equipped with complete gear to carry on commercial fishing tests that may be necessary in connection with sea lamprey studies. Walter Haertel designed the new vessel, which is to be Diesel equipped.

Ewig Brothers, commercial fishermen of Sheboygan and Port Washington, Wis., recently ordered a new 50' steel fishing tug from the Peterson yard. The craft will be designed by the shipyard and will be powered by a Kahlenberg Diesel.

### William J. Wolter

William J. Wolter, 54, co-owner, general manager and secretary-treasurer of the Sturgeon Bay Shipbuilding & Dry Dock Co., Sturgeon Bay, Wis., died last month. Wolter established the shipbuilding company in 1934 in partnership with Capt. John Roen.

### Harbor Projects Delayed

Two harbor projects planned for Michigan's Upper Peninsula will be delayed because of the Korean War, according to the U. S. Army Corps of Engineers.

Col. D. A. Morris, district engineer at Milwaukee, said that a \$300,000 harbor deepening job at Manistique and the building of a harbor for small craft at Black River, Mich., have been deferred for the present.

### Lake St. Clair Fishermen's Assn. Meets

A meeting was held recently by the Lake St. Clair Fishermen's Association, and several speakers were heard. Appointment of an interlocking directorate between the West St. Clair Commercial Fishermen's Association and the St. Clair Fishermen's Association was made. The directors named were Lawrence Drouillard, president of the West St. Clair group, and Delmar Jubanville.

### Catch Lampreys in Weirs and Traps

Field operations during the second quarter of 1950 saw the end of this year's lamprey spawning runs in the Great Lakes streams and the removal of all but one of the weirs and traps operated within and without the first Experimental Control Zone, according to the Chief of the Great Lakes Fishery Investigations. These devices took a total of 31,518 spawning-run sea lampreys in Michigan streams. Seven weirs and traps operated in Wisconsin, on a co-operative basis with the Wisconsin Conservation Department, captured 16,391 sea lampreys. One weir and trap operated during a portion of the season in Indiana took 896 sea lampreys.

### Urged to Save Whitefish Livers

Whitefish livers provide a top-flight Great Lakes delicacy, according to Ken Kimball, an outdoor writer who says the livers are difficult to get in any quantity. Fishermen and fish handlers are urged to offer them for sale.

## Florida Study to Reveal Areas Suitable for Oyster Farming

According to an announcement by R. M. Ingle, assistant supervisor of the Florida oyster cultivation department, work has been started in the waters off Panama City to determine potential oyster cultivation there.

The department's floating laboratory *The Spat* left Apalachicola recently with a crew of two which later was joined by Ingle. Samples of water for testing salinity and other features will be taken and tested aboard while studies of bottom conditions vital to life and growth of oysters will be undertaken on the spot.

This is the first time in the history of the State such an undertaking has been scientifically approached. If it proves successful, Ingle believes it will establish a precedent for rehabilitation of the oyster industry in the State.

### Shrimping Good Off Fernandina

After many weeks of practically no catches, the shrimping fleet out of Fernandina last month began to take catches ranging as high as 1,000 lbs. per boat. While the average catch was around 400 lbs. per day, some boats consistently exceeded this figure.

It is reported that the recent hurricane winds are largely responsible for the reappearance of shrimp along the Atlantic coast in the Fernandina area. Usually the best shrimping season in this vicinity extends over the months of September to December.

### Hurricane Damages Cedar Key Industry

Hurricane winds reached a velocity of 125 miles an hour at Cedar Key last month, and 90 percent of the fishermen's boats and nets were destroyed. The wind wrapped fish nets around stumps of twisted cedar trees and tied them into hard knots in some places. Boats were left tilting on dry land or resting on their sides in the water.

The Red Cross promised to replace nets and boats if they were needed to support families. The Red Cross also put in an order for 100 tents to provide temporary shelter for 400 people in the fishing village who were made homeless.

### Okeechobee Issue to Be Settled by Fishermen

Members of a special 14-man committee appointed by the State Game and Fresh Water Fish Commission to make recommendations on seining and netting in Florida's fresh waters, based on findings of a biological survey covering Lake Okeechobee, Lake George and the St. Johns River for a period of 24 months, adjourned September 29 without reaching a decision.

Committee members agreed they had come to the meeting with more or less fixed opinions and disbanded themselves after recommending that the Commission select at random 25 holders of fresh-water fishing licenses through the State and let them make the recommendations based on the biological survey.

Indications were that the report of the biological survey, compiled by John F. Dequene, the Commission's Chief Fisheries Biologist, leaned toward commercial fishermen seining the above-named waters for catfish, small game fish and predators.

Some 65 interested persons from throughout the State, representing both sports and commercial fishing interests, attended the meeting.

### To Study Sharks and Shrimp

Florida State University's marine biological laboratory announced on September 23 plans to capture live sharks to study their habits.

The sharks will be confined in a fenced-in pond near the laboratory's coastal headquarters at Tallahassee. Their blood will be analyzed and breathing habits studied.

The laboratory also has begun a study of shrimp in Apalachee Bay in an attempt to discover the time and place they spawn, their growth rates and their movements.



The "Sunshine", 60' shrimp trawler owned by Capt. E. L. Peterson of St. Augustine, Fla. She was built recently by Diesel Engine Sales Co. of St. Augustine. The vessel is equipped with D13000, 120 hp. Caterpillar Diesel with 2:1 Snow-Nabstedt reduction gear, 42 x 32 Columbian propeller, Goodrich Cutless stern bearing, 32-volt Onan generating set, Madesco blocks and Columbian rope, and is treated with Cuprinol wood preservative.

## South Carolina Farm Ponds Proved Feasible in Test

Five washtubs full of shrimp and two 55-gallon drums full of edible fish have been taken out of a four-acre marsh pond at Seaside Farm, near Mount Pleasant. The entire yield of the pond was not taken, as the fish were caught in a castnet when they came to the pond exit and many escaped by remaining in pools left during the draining process.

J. C. Long, owner of the farm, said he constructed the pond as an experiment to see if it would be profitable for farmers along the sea coast to build such ponds as a means of obtaining additional income. He reported that the yield from his pond demonstrated to him that this is possible.

Mr. Long added that there are abundant acres of marsh lands which could be diked in even easier than his at Seaside Farm.

G. Robert Lunz, Jr., director of the Bears Bluff Laboratories, who was present when the pond was drained, expressed satisfaction at the size and quantity of shrimp caught. The shrimp included a big percentage of large pink shrimp of a species similar to that which recently brought large profits to trawlers in the waters near Key West.

The bulk of the fish were mullet, and there were a number of fairly large sheepshead, a weakfish about 11" long, a number of flounders, including one about 2' long, and two bass, about 32" long.

### Shrimp Trawler "Old Man" Floated

The 50' shrimp trawler *Old Man*, which was aground for a day between Hunting Island and Fripp Island, arrived safely at Mutual Docks in Beaufort September 25, with Capt. Bill Tanner and his crew aboard.

The boat went aground the previous day while trying to pass a slough from the ocean to Fripps Inlet. She was freed by the heavy surf which crossed the bar as the tide rose again. The trawler is owned by Capt. Gus Olsen, of St. Augustine, Fla.

### Apply for Oyster Bottom Leases

S. V. Toomer, Ocean Lake & River Fish Co., L. P. Maggioni & Co., and Coastal Seafood Co., owned by Walter Lubkin, have all applied recently to the State Board of Fisheries of South Carolina for leases of oyster bottoms in Beaufort County for the planting, growing, propagating and gathering of oysters.



## Texas Seafood Production Largest on Record

More fishery products were landed at Texas ports during the fiscal year which ran from Sept. 1, 1949 to August 31, 1950 than in any previous year since accurate record-keeping was instigated. Landings at Texas ports during the period totaled 85,243,200 lbs., 23 percent greater than the poundage received during the 1948-1949 fiscal year.

Landings of finfish, which amounted to 47,287,300 lbs., were .7 million lbs. less than in the previous fiscal year. The decline in receipts of finfish resulted from reduced landings of menhaden.

Edible finfish receipts for the fiscal year were 3,167,200 lbs.; scrap fish, 34,300 lbs.; and menhaden, 44,085,800 lbs.

There was an increase in the catch of black drum, red snapper, whiting, sea catfish, sheepshead and pike over the preceding year; and a decline in the catch of redfish, sea trout, flounders, mullet and grouper.

Receipts of shellfish, which amounted to 37,955,900 lbs., were 16.7 million lbs. greater. The gain in the production of shellfish was caused by record landings of shrimp, which amounted to 37.8 million lbs., compared with 21.2 million lbs. in the same period the previous year.

The shellfish receipts also included 3,400 lbs. of crabs and 69,200 lbs. of oysters.

### Bays Opened to Large Shrimp Trawlers

September 1, the date when bays were opened to large trawlers, found a concentration of small shrimp boats in the Matagorda Bay area. During the first days of the shrimp run, catches ranged upwards to 2,000 lbs. per boat per day. A sudden decline in production, however, was noted by the second week, when daily catches dropped to 400 lbs., and often 100 lbs.

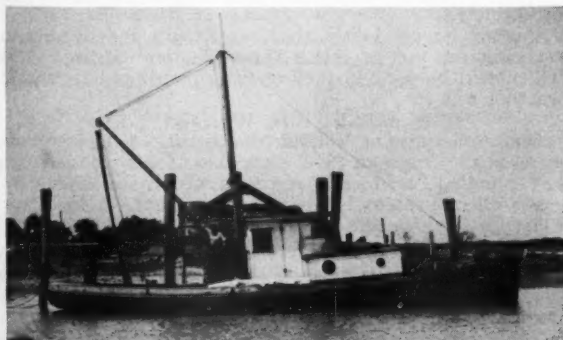
The Ingleside shrimping fleet is working in the Matagorda Bay area. For the first time in many years, no shrimp are being landed at Ingleside.

The latter part of September a few shrimp concentrations were found in the Gulf near Port O'Connor and above Freeport. Several of the larger trawlers left the bays to participate in the run offshore.

### Fish Tagging Program

The Rockport Laboratory's fish tagging program indicates that the fish are "on the move" again. During the Summer months returned tags showed that trout, redfish, drum, flounder, and other fish were hanging close to one spot. Not a single fish was caught more than a mile from the place of tagging.

Tags recently returned to the Laboratory show the fish to be moving farther and farther away from the spots they were tagged.



The "Ruth", 44' shrimp trawler owned by Clarence Magwood of Moultrieville, S. C. She has a capacity of 9 tons, and is powered by a 115 hp. Chrysler gasoline engine which swings a 32 x 20 Columbia propeller through a 3:1 reduction gear, and is equipped with a Twin Disc hauling clutch. The craft has Danforth anchor and Willard batteries, and uses Esso fuel and lubricating oil and Linen Thread Co. Gold Medal nets.



The "Annie Belle", 65' snapper fisherman owned by Capt. Allen H. Gollott of Freeport, Texas, and powered by a 165 hp. General Motors Diesel. Her trips last from 8 to 15 days, and she catches 5,000 to 15,000 lbs. per trip.

A continuance of the tagging project over a number of years is expected to provide accurate and fairly complete information on the spawning and migration habits of each species. This will mean wiser regulation and better fishing in the years to come.

A major part of the tagging operations are carried on at the Cedar Bayou fish trap under the direction of Ernest G. Simmons.

### New Cut-off Channel Planned

Preliminary details are being worked out for securing right-of-way titles for the Rockport-Aransas Pass cut-off channel. The cut-off will enter Aransas Bay near Turtle Bayou at Rockport and parallel the shoreline, joining the Corpus Christi channel. Proponents of the new project state that it will cut three miles off the route into Corpus Christi.

## Shrimp Quality Control Planned By New Texas Association

The Texas Shrimp Association, the first of its kind to be organized in the State, began functioning in late September. The Association's program embraces a three-fold aim:

- (1) Setting up of Quality Control Committees, made up of selected technicians and men from the ranks of the Association, whose job it will be to make rules and regulations for the members of the Texas Shrimp Association to follow in the processing of shrimp from the boat level to the packing and freezing plant.

- (2) Publicity and advertising to acquaint the buyers of shrimp with the advantages of purchasing Blue Ribbon Quality Texas Shrimp.

- (3) Especial attention to conservation, with assistance being given by the U. S. Fish & Wildlife Service.

The Association will have no jurisdiction over matters related to the price of shrimp, and the officers or other committees or members are not authorized or empowered in any way to represent the Association in such matters.

Officers of the Association are as follows: president, John A. Mehos, Liberty Fish & Oyster Co., Galveston; first vice-president, J. R. Clegg, J. R. Clegg Shrimp Co., Port Lavaca; second vice-president, N. F. Jackson, Jackson Seafood Co., Rockport; third vice-president, W. E. Kenon, Kenon Seafood Co., Brownsville; and secretary-treasurer, John J. Faubion, Port Lavaca. Directors include J. E. Barr of Harlingen and John W. Nelson of Aransas Pass.

It is felt that the Association will be mutually beneficial to the producer and consumer. All but a few members of the shrimp industry are reported to have signed up.

## Maine Sardine Pack Nearly Double That of Last Year

Production of fully 4,000,000 cases of canned sardines is now estimated for Maine, which would be an all-time record. A total of 320,000 cases was added to the pack in the two weeks ending Sept. 23, raising the season's total to 3,430,000 cases compared with 1,890,000 a year ago. The market has stabilized due to the recent slowdown of canning and packer disposition to hold rather than unload.

Receipts of herring during the first seven months of 1950 were 30.5 million lbs. greater than in the same period the previous year.

Imports of fresh herring into the Maine and New Hampshire Customs District during the first seven months of 1950 totaled 15,286,350 lbs., compared with 6,311,800 lbs. in the same period in 1949.

### Want Boothbay Harbor as Base for Tuna Study

Officials of the U. S. Fish and Wildlife Service in Washington were requested the last week in September to make Boothbay Harbor the headquarters for a \$75,000 Federal financed study of North Atlantic tuna resources. It was pointed out that the Fish and Wildlife Service's McKown Point Station would be particularly valuable as a headquarters for the field work of the study. The requests were made through Gov. Frederick Payne by the Boothbay Region Chamber of Commerce and the Boothbay Region Tuna Club.

Gov. Payne previously requested officials of the Fish and Wildlife Service to make a Maine port the headquarters.

In a letter to Fish & Wildlife Service Director Albert Day, Gov. Payne stated that the coast of Maine is the logical location for the base of operations.

"We are strategically located at the center of the North Atlantic fisheries, have excellent facilities and the biggest stake in the commercial possibilities which the study might produce," said the Governor.

"The Maine fishing industry wants to see the program operated on a practical basis, which means locating the schools of tuna and discovering the most practical method of catching them," concluded the Governor.

He requested Day to give Commissioner Richard Reed and interested Maine packers an opportunity to discuss the project with Washington officials before final plans are made. Reed and others will go to Washington soon for this purpose.

Senator Owen Brewster introduced the legislation that created the fund for this project, which originated with the Maine Sea and Shore Fisheries Department in conjunction with Maine packers.



Sardine carriers owned by Stinson Canning Co., at the Company's dock in Prospect Harbor, Me. On the outside is the "Ida Mae", which is powered with a 120 hp. Fairbanks-Morse Diesel; and on the inside is the "Eva Grace", which has a 130 hp. Cummins Diesel with 3:1 Capitol reduction gear.



Left to right, Bud Preston, engineer; Capt. Toby Martin, skipper; Louis Darling, twine man, all of the 63' dragger "Willard Daggett"; and Loran Gidney, plant foreman, at F. J. O'Hara & Sons, Inc., Portland, Me. The dragger is owned by Willard Daggett Lobster Co., and powered with a 150 hp. Superior Diesel with 3:1 Snow-Nabsted reduction gear.

The project was designed on the assumption that vast schools of small tuna weighing from 50 to 150 lbs. prevail in the Gulf of Maine which stretches from Cape Cod to Nova Scotia.

According to Eastport packer Arnold Vogl, the small tuna are excellent when canned and are comparable to or better than the West Coast varieties.

### Redfish Landings Show Big Gain

Landings of fishery products at Maine ports during July amounted to 64,725,900 lbs., valued at \$1,725,035 to the fishermen. This was an increase of 21,796,800 lbs., or 51%, in volume of the landings, but a decrease of \$18,746, or 1%, in value compared with the previous year. The increase in volume was due mainly to large gains in the landings of herring and redfish.

During the first seven months of 1950, Maine landings of all species amounted to 183,083,100 lbs., valued at \$7,251,814. This was an increase of 45% in poundage and 7% in value as compared with the corresponding period of 1949. Landings of redfish increased nearly 22 million lbs.

Portland landings during July amounted to 10,750,100 lbs., valued at \$297,701. Landings at that port during the first seven months of 1950 totaled 40,678,600 lbs. valued at \$1,637,464, compared with 23,275,400 lbs., valued at \$818,715 during the same period in 1949.

### Quahogs Transplanted to Barren Area

Eighteen diggers using 15 boats on September 20 moved 300 bushels of seed quahogs to barren areas in Maquoit Bay, Brunswick, under supervision of the State Sea and Shore Fisheries Department.

The men were paid at the rate of \$10 per day, the money having been voted from license fees collected by the town.

Quahog buyers joined the State, town and diggers in carrying on the project. Three dealers donated \$700 which will be used in further transplantings before cold weather sets in.

### Lobster Boat Wrecked

Olaf Holmquist of Vinalhaven lost his 35' lobster boat Rosa on the ledges of Seal Island in outer Penobscot Bay last month. Fortunately, he was uninjured when the craft hit the rocks, and was later rescued by Capt. Clarence Bennett who was fishing in the area.

### Sardine Film to Be Distributed Abroad

The Interior Department's sound and color film, "It's the Maine Sardine," has been selected for use by the Department of State's information service abroad.

The International Motion Picture Division of the Department of State plans to make 350 prints of the Maine fishery film—with translations in 25 languages—for showing by U. S. embassy and information offices in foreign countries.

The film was produced in 1948 by the Fish and Wildlife Service of the Department of Interior in cooperation with the Maine Department of Sea and Shore Fisheries

## Gloucester Mackerel Fleet Catches Show Improvement

The most mackerel landed in Gloucester in one day for a long time was reported on September 27 when ten seiners had 189,000 lbs. that sold at 6½¢ per pound. The vessels were the *Ida* and *Joseph*, *North Star*, *Rose* and *Lucy*, *Isabel J. II*, *Capt. Drum*, *Yankee*, *Rosie* and *Gracie*, *Natale III*, *Frankie* and *Rose* and *Romerly*.

The mackerel seiners had another good day on September 28 when they arrived with 80,500 lbs. of mackerel. They received 6¢ per pound, and the *Eleanor* reported having the best trip, 20,000 lbs.

The small seiner *Nova Luna*, Capt. Charles Frontiero, was in port on September 9 with 17,000 lbs. of mackerel. The boat was reported to have shared some \$700 for the previous month.

Capt. Frontiero speaks well for the California seining rig he has had aboard the boat for the past three years. The craft has a crew of seven and sets right from the boat instead of using a seine boat.

Another small mackerel seiner which has been doing very well this season is the *Providenza*, a 43' craft skippered by Wilbur Fraser. She has a crew of seven.

During three days last month they landed 28,800 lbs. of mackerel at John Wright's and stocked approximately \$5000 with a gross share per man of some \$500.

### Trash Fish Landings Double

Through August, the port of Gloucester has had total landings of trash fish amounting to 12,632,300 lbs., which is twice as much as for the same period in 1949. Trash fish is sold directly to the dehydrating plants to be made into animal food. New Bedford reports having taken 51,334,400 lbs. in the eight months.

### Good Groundfish Trip

Capt. Benny Favazza and crew in the Gloucester dragger *St. Peter II* had a fine trip of groundfish at Boston on September 29. They hauled for 90,500 lbs. of fresh fish, mostly haddock scrod. The price was from 5 to 5½ cents.

### Herring Fishermen Go Back to Work

Herring fishermen went back to work in Ipswich Bay last month after a six-week tie-up as a protest against a price of \$12 per ton, considered by the fishermen as too low to allow a day's pay. Some 30 boats and more than 100 fishermen had been idle. Now the price is to be increased to \$14 per ton.

### First Aid Course for Fishing Industry

A Red Cross First Aid instructor training course for the fishing industry is to be held in Gloucester the

and the Maine Sardine Packers Association and shows the catching of sardines off the Maine coast and the methods used in processing the catch.

### Fishing Boats Towed by Strange Submersible

A story of being towed helplessly astern at sea by a strange submersible was told by crewmen of two Portland fishing draggers last month.

The 110' *Cherokee* and the 86' *Evzone* were in port to replace \$3,000 worth of big nets and other gear lost off Brier Island, N. S., 180 miles east of Portland.

Arthur W. Jordan, skipper of the *Cherokee* and spokesman for the 14 men aboard the two vessels, stated that the two draggers had their sterns dragged beneath the water by the terrific haul just before they slipped the clutches of the submersible. The *Cherokee* was towed about 25 minutes, the *Evzone* an hour and a half.

They are firmly convinced it wasn't a whale, for such a mammal can't remain submerged as long as they were towed. And it wasn't the strong tide that runs in those waters, they insisted.

The shine on the cables where they parted, they believe, is evidence that they were wearing on a metal surface.



The 65½' dragger "Whitstone" owned and skippered by Capt. Alton Hudgins. Operating out of Gloucester, Mass. in the Summer and Virginia ports in the Winter, she is equipped with a 171 hp. Buda Diesel, 3:1 Twin Disc reduction gear, 56 x 42 Columbian propeller, Surrutte batteries, Ederer nets, and uses Socony lubricating oil.

weeks of October 16 and 23. The course is scheduled to take 30 hours, and applies to both plants and boats. The Gloucester Fisheries Association is co-operating in the safety effort, which marks the first time that Red Cross First Aid has been introduced into the fishing industry.

### Rockport Lobstermen Aided by Red Cross

Rockport lobstermen whose businesses were crippled by the September 11th gale are receiving financial assistance from the Red Cross.

Thirty lobstermen already have applied for assistance and at least 18 have been furnished with money for purchasing twine and wood laths to make some 500 new lobster pots.

This is believed to be the first time in New England that the Red Cross has declared a port a disaster area because of the loss of fishing or lobster gear. The 45 full-time lobstermen suffered the loss or damage of 5,300 traps, or 90 per cent of their gear, valued at nearly \$35,000.

### Capt. Ralph Carmines

Capt. Ralph Carmines, well known along the Gloucester waterfront, died last month. Capt. Carmines was one of the first Southerners to fish out of Gloucester for redfish during the Summer months.

He came to Gloucester in his dragger *Cecil W.* from Virginia some 10 or 12 years ago. Capt. Carmines owned the *Alice Ann*, which was lost last year, and the *Belle Isle*.

## Massachusetts Swordfishermen Have Successful Season

Landings of the Gloucester and New Bedford swordfish fleet totalled 2253 fish from June through September. While 645 fish were landed at New Bedford and 101 at Gloucester, the bulk of the catch, or 1507 fish, were brought into Boston.

The high-line Gloucester swordfishermen were the *Evelina M. Goulart*, with 282 fish; *Jorgina Silveira*, 239; *Edith L. Boudreau*, 204; *Doris F. Amero*, 163; *Evelyn G. Sears*, 154; and *Lady of Good Voyage*, 149.

The seven top boats out of New Bedford were the *Winifred M.*, which had 126 fish; *Anastasia E.*, 103; *Rosemarie V.*, 91; *Bozo*, 66; *Jennie M.*, 58; *Rita*, 57; and *Rose Jarvis*, 54.

The New Bedford catch totalled about 150,000 lbs. at an average price of 44 cents, with the quantity and price approximating those of last year. The Boston receipts for August were 126,000 lbs. at 40 cents per lb., compared to 93,000 lbs. at 41¼ cents in 1949. A late September trip at Gloucester brought 50 cents per lb.



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MARINE ENGINE DIVISION

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## New Bedford Bay Scallop Season Has Good Start

Native scallops proved plentiful but small the opening day of the season, October 2, as an estimated 370 commercial fishermen in New Bedford, Fairhaven and Dartmouth caught their limit of 5 bushels each. Results were reported good particularly in Clarks Cove, New Bedford, where nearly 100 boats were operating. Hours for fishing are 7 a.m. to 5 p.m. and commercial fishermen are limited to 5 bushels a day.

The shellfish ran approximately one-half gallon to the bushel and brought wholesale prices ranging from \$6.25 to \$6.75 a gallon. Total catch was estimated at 925 gallons having a value of about \$5,000 on the opening day.

### "Theresa A." Lost with Crew

The 106-foot New Bedford scalloper *Theresa A.* sank 100 miles east of Nantucket Light in the wake of the Atlantic hurricane, September 12. Last word of the 12 man crew came from the ill-fated craft's captain, Frank Airhart of New Bedford, when he radioed that the boat was sinking and the men were taking to dories. An organized search was carried on by the Coast Guard for almost a week.

The *Lubenray*, skippered by Capt. Shirley Mitchell of Fairhaven, was the nearest of any of the fishing vessels to the scene, but mountainous seas, rain squalls that obstructed vision and winds which reached 65 miles an hour or more prevented her from reaching the spot. At one time the force hunting for the crewmen included seven aircraft and seven ships.

### "Muriel and Russell" Breaks Up

The 10-man crew aboard the 61-foot dragger *Muriel and Russell* was landed safely at North Beach, Chatham, September 14, but the vessel broke up in pounding seas within two hours. The craft foundered helplessly in shoal waters 12 to 25 miles south-southeast of Pollock Rip Light throughout the wake of the hurricane and despite a fouled propeller she reached the mainland under her own power.

Adverse conditions prevented the Coast Guard from reaching her before she was beached. A Coast Guard plane flew over the *Muriel and Russell* and dropped two life rafts, one of which was picked up by the crew and was used to reach shore.

### Good Landings

A record landing of 467,100 pounds of fish and 77,895 pounds of scallops were sold at auction at Pier 3 the last day of September, indicating an early seasonal high. Heavy landings are expected throughout October. Outstanding total catch for 17 draggers was 216,500 pounds of yellowtail that sold for 7-8½ cents a pound.

New Bedford landings during August amounted to 11,506,197 lbs. The catch included: 402,615 lbs. cod, 869,500 lbs. black backs, 2,000,385 lbs. yellowtails, 82,105 lbs. haddock, 801,605 lbs. scrod, 1630 lbs. mackerel, 1,361,562 lbs. sea scallops, 543,830 lbs. mixed fish. Almost half of the total landings, 5,442,965 lbs. were mixed fish used for reduction and animal food.

Walter Wlodyka, Fairhaven lobsterman, caught a 270-pound swordfish singlehanded off Cox's Ledge last month. He nabbed his prize catch from his 40' *Jennie C.*

### Two Boats to Get New Engines

The dragger *Dauntless* owned by Capt. Rudolph Matland of Fairhaven, will have a new Model WAKD Wolverine Diesel. The engine will swing a 50 x 34 Columbian propeller through 3:1 reduction gear, and the horsepower is 200 at 1600 rpm.

A Model 2505, 240 hp. Buda Diesel, with 2:1 reduction gear, will be installed in the New Bedford dragger *Growler*, skippered by Capt. Mat Bendicksen.



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New Bedford, Mass.



Merwin L. Willis' 32' dragger and swordfisherman "Audrey M." of Block Island, R. I., powered by a 110 hp. Chrysler gasoline engine with Hyde propeller. The vessel is painted with Smith's paint, has a Hathaway hoist, Exide batteries, and uses Gulf lubricating oil, Plymouth cordage, Roebling wire rope. She has a capacity of 12,000 lbs.

## Rhode Island Oysters of Nice Quality and in Good Demand

The Rhode Island oyster business appeared to be humming after two weeks of shipping, and according to Otto J. Alletag, president of the Warren Oyster Co., the demand for oysters is better this season than in the past several years.

Alletag reports that the supply of oysters is expected to hold up well and that it looks like a good season for meat quality.

The prices which the Warren Oyster Co. is getting are the same as last year: \$5 for "selects", or stewing oysters; and \$5.75 for "counts", the largest size.

The counts have the heaviest demand in Illinois and Pennsylvania, where they are used in large quantities for frying. In this section of the country, where oysters are preferred in stews and on the half shell, the selects are the biggest seller.

### Warren Scallop Yield Better This Season

Tony Sousa, who runs a shellfish business in Warren with his brother Bill, reports that the scallop yield was better this season than a year ago and that the scallops could be found anywhere a dredge was dropped.

Most of the scallops that came into his shop were from Bristol Harbor. The large sets were cleaned out fast, he reported. Most of the scallops came from deep water.

Although scallop fishing was productive of a good harvest in the Bristol area during the week of September 18, it was conceded by shellfishermen there that the yield had passed its peak by the last week in September and catches were expected to be smaller and more difficult to get.

When the scallop season was a little more than a week old, very few Bristol shellfishermen were able to come close to taking the 15 bushel to a boat limit.

### Catches Sea Horse in Scallop Dredge

A small sea horse about 6" in length and a rarity in Northern waters, was caught last month in Little Narragansett Bay in a scalloping dredge operated by Capt. Prentice Lanphere of Watch Hill and Albert T. Bailey of Montclair, N. J.

Sea horses move about in an upright position. A rear fin, which looks like an outboard motor, appears to provide the body motion. The fin flutters and churns while the animal is in action.

Capt. Lanphere, who has been taking parties out in the bay for 41 years, says he has never seen a sea horse before.



## Cape Cod Scalping Gets Underway

Scalping began on October 1 in Barnstable, but no scallops may be taken from Barnstable Harbor by dredge, and no scallops may be taken Sundays except for family use.

Maurice W. Wiley, chairman of the Eastham Board of Selectmen, announced that the South side of the Salt Pond would be open on October 1 to the taking of shellfish.

The Salt Pond and River, which had been opened previously, will be open Sundays only for taking of shellfish for non-commercial use.

At Chatham, scallop-taking is prohibited except from a half hour before sunrise until sunset. Scallop-taking is also prohibited Sundays.

Commercial shellfishermen are allowed to take five bushels of scallops, but in no case, more than 10 bushels a boat.

Scallop dredge frames must not measure more than 36" wide and must be of light construction, similar to the so-called conventional lead dredge.

Wellfleet Harbor's scallop grounds will remain closed to fishing by commercial means until October 15.

The decision to delay opening of commercial activities was made to allow more time for the scallops to grow and harden and for more of the trash to wash out to sea. There appeared to be a fair crop of scallops ready for harvesting the latter part of September.

The limit for commercial scallops at Wellfleet will be 10 bushels, with the shells, for each man, and not more than 20 bushels a boat, with shells, in boats employing more than one person. The commercial license fee is \$5.

Scallop beds in Provincetown Harbor will remain closed until November 1.

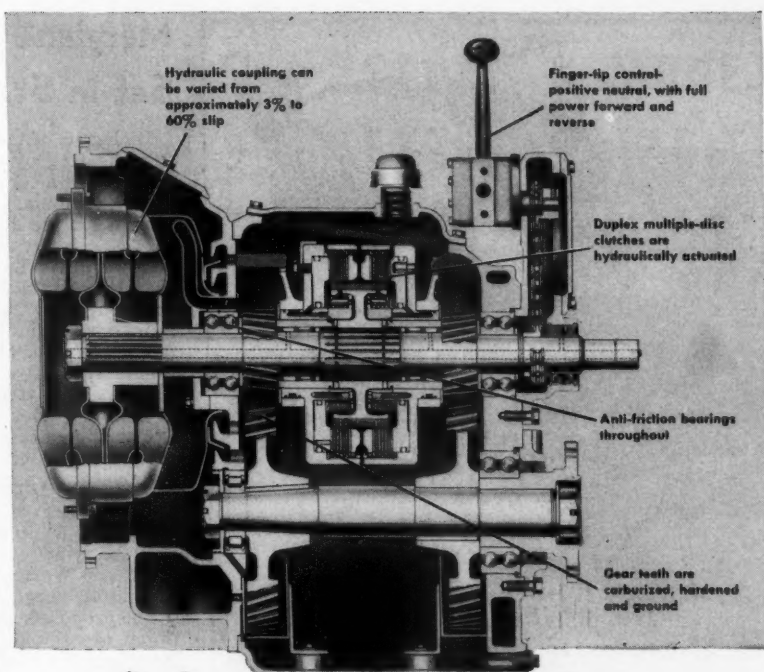
### Small Catches Continue at Provincetown

Fishing continues spotty in the Provincetown area, with no large catches reported, except by the bigger boats that land their fish at New Bedford or other ports. Trap fishermen also are doing little.

All types of fish have been scarce this year, including tuna, which in other years has been plentiful. Mackerel failed to make any sustained run as in other years.

### Hurricane Damage Slight

Damage to Provincetown fishing boats and the harbor front in the hurricane of Sept. 11 and 12 was not extensive. Slight damage was done to draggers and smaller fishing boats, including broken rails, and on the Cape Cod, Capt. Manuel Phillips, two holes were made in the starboard side, with damage amounting to about \$1,000.



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The hydraulic coupling between the engine and the gearing in this unit is a *variable-fill* coupling which can be adjusted to permit up to 60% slip by the touch of a valve. The practical effect of this slip is to multiply the normal reduction ratio by  $2\frac{1}{2}$ ; with 3:1 gearing, for example, it gives the equivalent of a 7.5 overall reduction.

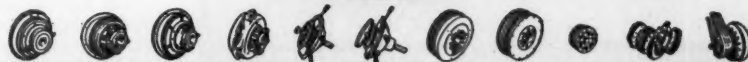
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erly slowed for trolling... yet at the touch of a valve normal reduction can be restored for "first out, first back" performance.

In addition, the hydraulic feature produces the smoothest power transmission of all, dampens out engine vibrations, protects the engine and gears against sudden shocks when the propeller is fouled.

For trolling without trouble, plus many other new advantages not described here, write today for complete information on the new Twin Disc MGH-220, which is adaptable to engines from 135 to 230 hp in the 1400 to 2100 rpm class. The MGH-220 is also available as a marine reverse and

reduction gear with a rubber block drive instead of the hydraulic coupling.



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## Maryland Has Heavy Oyster Set in St. Mary's River

Biologists of the Department of Research and Education investigating oyster setting on clean test shells in wire bags report a continued high setting rate in the St. Mary's River, a tributary of the Potomac. This waterway is well-known for the abundance of young oysters which attach to oyster shell and other available cultch. The highest concentrations have been found in the upper River rather than in the middle and lower parts.

Among test shells periodically exposed near Martin Point an accumulated set of approximately 280,000 spat, or newly attached oysters, per bushel have set this Summer, mostly during early July.

An accumulated set of 26,300 spat per bushel occurred at Seminary Bar where a State shell planting was made. Better than one per cent survival may occur here since the shells are less crowded.

### To Discuss Fishing Structure Limits

The matter of revision of limit lines governing the placing of fishing structures in Chesapeake Bay, Md. in that reach between the mouth of Magothy River on the south and Worton Point on the north, will be considered at a public hearing to be held in Baltimore on October 26.

The proposals contemplate the inclusion of certain additional areas within the limits for placing fishing structures and the elimination of certain other areas presently within these limits. The meeting also will consider a proposal that no structure may be located closer than 1,600' to the edge of a dredged channel, whereas presently such structures may be placed within 200' of the channels.

### Seafood Yield Shows Gain

Seafood production in the Crisfield, Ocean City and Cambridge areas of Maryland totalled 1,407,200 lbs. during August, which was 218,600 lbs. more than in the same month of last year. The Crisfield area had a catch of 854,800 lbs., which consisted entirely of shellfish and accounted for over 60% of the entire catch.

Shellfish production for the three ports amounted to 1,006,400 lbs., and the finfish yield was 400,800 lbs. The leading species in the finfish classification was croaker, with 182,100 lbs., all landed in the Cambridge area.

Landings during the first eight months of 1950 were 10,315,600 lbs., nearly 1½ million lbs. less than in 1949.

### Capt. Creighton Assumes New Duties

Capt. Amos Creighton, long-time veteran of the Maryland Tidewater Fisheries Patrol Fleet, has been named assistant to David H. Wallace, who is chairman of the Fisheries Commission.

Capt. Creighton, who joined the patrol service in 1911, formerly was commander of the fleet and skippered the flagship *Potomac*.

### Crab Plant Featured in "National Geographic"

The crab meat packing plant owned by R. C. Bradshaw of Crisfield was featured in the September issue of *National Geographic* magazine. Colored pictures show the actual operation of picking crabs in the plant.

Mr. Bradshaw, a comparative newcomer in the seafood packing industry at Crisfield, has built up a big business and is one of the largest handlers of crabs and crab meat in the City.

Last year the plant shipped 110,000 lbs. of fresh crab meat as far West as Utah, north to Minnesota and south to Florida and Texas.

Forty workers are employed in the plant and pick and pack 1,250 lbs. of crab meat a day.

### Somerset Oyster Packers Have Good Season

The oyster packers in Somerset County last season bought and shucked 277,971 more bushels of oysters than in the previous year. They used 222,568 additional bushels of Maryland oysters and 55,403 more bushels of out-of-State oysters.

Nearly one hundred thousand bushels of shells have

been planted and many seed oysters have been transplanted into Somerset County waters. It is expected that several thousand more bushels of seed oysters will be moved into Pocomoke Sound this month.

#### Hance Sterling

Hance Sterling, well known seafood packer, died suddenly last month of a heart attack at his crab packing house in Wenona.

Mr. Sterling had operated a seafood business at Wenona in the Summer season for several years and had spent his entire life in this section, operating an oyster shucking plant in Crisfield during the Winter.

## Connecticut to Have a Fish Meal Plant at Stonington

Action by the Connecticut General Assembly at a special session in mid-September cleared the way for erection of the proposed fish meal plant at Stonington.

The Assembly amended a 1909 State statute to permit "rendering and treatment of fish into food for human or animal consumption within the town of Stonington." The statute originally barred manufacture from the fish of any guano, oil, or fertilizer in the town of Stonington and two other Connecticut waterfront towns. It was designed to keep menhaden fertilizer plants, other than two then in operation, from locating in the towns.

Ocean Industries, Inc. of Boston, who propose to build a \$30,000 cinder block rendering plant at Longo's Dock, Stonington, previously had prepared an action asking the State Superior Court to find the statute did not ban their process or product. That action is now canceled.

#### Scalloping Good in Little Narragansett Bay

The opening date for Connecticut scalloping in Little Narragansett Bay was advanced to Sept. 15 this year by the State Legislature as the result of complaints from fishermen. The season originally was scheduled to open on Oct. 1.

On Sept. 16, the Connecticut scallop fleet moved into the Bay in considerable numbers. For the first week, scallopers on both the Connecticut and Rhode Island sides of the Bay had little trouble filling the 15-bushel a day quota. Power dredging is permitted in the Bay.

Howard Burdick, veteran Avondale fisherman, reported the 1950 crop was very small-sized with a bushel of scallops opening to less than three quarts. The price of \$2.50 a bushel unopened or \$8 a gallon opened fell off after the first week. Prevailing prices early in October were around \$1 a bushel or \$6 a gallon.

Stonington Harbor's scallop season opened Oct. 1. Although power dredging is permitted in the Harbor, no fisherman reported taking the 15-bushel quota. John Maderia of the *Fatima* said the crop outlook is poor.

Several hundred small-boat scallopers took an estimated 8,500 bushels out of the Niantic River on the Oct. 1 opening day there. This represents about \$30,000 worth of scallops in the shell or \$52,000 opened.

A 15-cent permit issued by the Niantic scallop commission allows a scalloper to take a bushel; a 50-cent permit allows a take of three bushels. Permit revenue in the 12 years since the scallops first appeared in the River in quantity has amounted to about \$10,000.

A part-time aquatic biologist to study scallops and river conditions at Niantic has been discussed with Dr. Russell P. Hunter, Connecticut Fish and Game Commissioner. The biologist would be paid from the permit revenue.

Initiated this year were two control measures, including a constant patrol by constables to prevent taking of seed scallops, and a \$1 a bushel bounty for starfish.

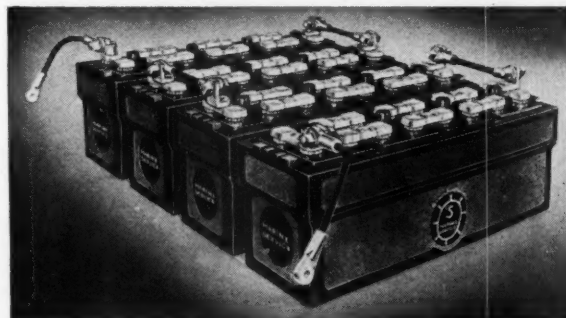
#### To Operate Boatyard

Capt. Israel Jacobs of the Noank Marine Exchange announced recently that he has leased the Darrell Boat-houses at the head of Stonington Harbor. He and his sons, partners in the Exchange, plan to haul and store small boats, and to perform all the other functions of a small boatyard.

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## Georgia Sounds Remain Barred To Commercial Shrimpers

After hearing four hours of sharp arguments, Georgia's State Game & Fish Commission voted 9 to 1 on September 22 to continue its three-year-old ban against commercial shrimp fishing in the State's sounds and bays.

Protection of the industry, and the fact that South Carolina sounds are closed, were the major factors in the Commission's decision. The Commission's action affirmed a 6 to 5 vote at an earlier meeting in favor of continuance of the ban.

Spokesmen for sport fishermen and operators of large boats argued that dragging nets in sounds would destroy shrimp breeding and growing grounds and wreck the multi-million-dollar coastal industry. They further contended it would drive out game fish, ruining the State's opportunity as a tourist center.

Denying all this, small boat operators asserted that big shrimp are going to waste in the sounds, eventually migrating to Florida. They said they can't operate in the open ocean like the big boats.

One or two of the operators of commercial fishing boats stated that shrimp were now being caught outside in large quantities. They said the run of shrimp was the largest in recent years.

Commission Chairman J. R. Holland of Savannah revealed that a poll of all licensed shrimp operators showed a slight majority in favor of continuing the ban. The margin was 78 to 65.

The Commission also rescinded an order recently issued giving live bait dealers the privilege of fishing inside waters to catch shrimp to be sold to sport fishermen only.

### New Shrimp Packing Plant Opens

The addition of another packing plant was announced last month by the Trade Winds Co. which prepares

ready-to-fry frozen shrimp at Thunderbolt. This increases the number of workers employed by the firm from 250 to 400.

At the plants shrimp are dipped in egg batter and rolled in cracker meal. They are then packed in consumer boxes and weighed. Constantly moving conveyor belts bring the empty boxes from the folding machine and return the full boxes to be pliofilm-wrapped and packed for freezing. Thirty-five thousand boxes are packaged daily.

The industry developed from an idea of three people, William Mullis, Henry Ambos and Louis G. Ambos. They are reported to have originated the product, which has been an important development in the shrimping industry as a whole.

In addition to breaded shrimp, scallops, perch and oysters are put up in 12-ounce retail packages. The scallops are shipped from New York, and the oysters come from the Chesapeake.

The Trade Winds products are now sold in all forty-eight States and in Hawaii.

### Announce Merger of Seafood Firms

The merger of two St. Simons firms engaged in the processing and shipping of frozen seafood was announced recently.

They are the SeaPak Corp. and Aero Foods, Inc. both of which have carried on operations in former Navy buildings at Malcolm McKinnon Field on St. Simons. The new concern created by the merger will be known as Seapak Corp.

Plans have been made for immediately increasing the amount of processing equipment and a large quick-freezer has been ordered.

SeaPak Corp., organized 13 months ago, has employed more than 100 persons since August. Its founders were two St. Simons residents, J. O. Hice and Jim Meadows. Aero Foods, Inc., headed by J. Roy Duggan, has been operating since April.

## Scallops Are Valuable

(Continued from page 18)

viduals as old as 19 years have been recorded. Undoubtedly there are older ones, but aging is complicated by erosion of the shell, the slowing of growth, and the resulting indistinctness of the Winter check rings, by which growth is calculated.

### Starfish Major Enemy

The scallop does not suffer from a great number of enemies, and aside from man, only one is very serious. The starfish common to its geographic and bathymetric range is *Asterias vulgaris*, which preys heavily upon all sizes of this mollusk. The smaller scallops are easily opened by the larger starfish, and the larger mollusks, lacking a tightly closing shell, are subject to entrance by smaller starfish and to the insertion of the everted stomachs of the larger predators.

The valves of the scallop are eroded by species of the boring sponge genus *Cliona* and by the boring clam, *Saxicava arctica*. This action weakens the shell, but does not seriously harm the animal. It is believed that more extensive erosion occurs in this mollusk than in most others because it does not burrow and because it lacks an adequate protective cuticular covering on the shell.

Other questionably adverse conditions affecting the welfare of the scallop are: the handling of undersized individuals on deck, especially in sub-zero weather; the action of the dredge in disturbing the bottom and burying small sizes; and littering the beds with waste portions of the mollusks caused by shucking over the beds.

### Location of Beds

Sea scallops exist in accumulations generally known as beds, the location of which seems dependent upon the nature of the currents and the topography of the bottom. The beds generally occur in a long, elliptical shape, lying lengthwise parallel to the current, and in a bottom area of lower elevation. They are found in all types of bottom, from coarse rocks to mud, but setting of the early stages occurs more favorably on gravelly or rocky bottoms.

The range of this mollusk is from northeastern Canada to just south of Long Island, and its optimum range appears to include the coast of Maine and especially Georges Bank. The bathymetric range is from one to 150 fathoms, while dead shells have been found as deep as 400 fathoms.

The free swimming ability of the sea scallop has given opportunity for many suppositions concerning its possible migratory habits. Many scallop fishermen tell of mass evacuations of favorite beds, while just as many can tell of the sudden occurrence of beds where none formerly existed. Investigations so far have been able to show only movements from shallow to deeper water.



The British Columbia Provincial Police "P. M. L. 16" is powered by a Vivian Marine Diesel, 6 cylinder 6 $\frac{3}{4}$ " x 10", 120 horsepower engine with 3766 Reverse Gear with 2065-5 Reduction Gear.

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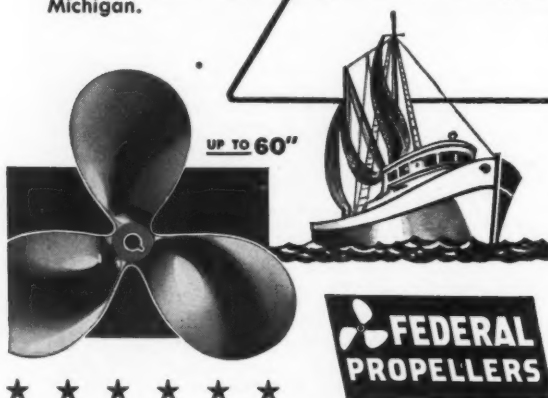
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## Long Island Oysters Are Plentiful and Large

The price of oysters has risen slightly since last Spring, according to Joseph B. Glancy of the Bluepoints Co. of West Sayville and Greenport, but there is an abundant crop and the oyster is larger than it has been at any time since the last war.

The Bluepoints Co., which has forty openers in full-time operation at the Greenport plant, said the approximate wholesale value of a gallon of oysters is anywhere from \$4.50 to \$6.00, about 50 to 75c higher than the price last year.

The oyster is more mature this season than in previous seasons because it has been allowed the natural four-year growth span before removal from its bay bed. War demands for food in recent years made it necessary to harvest an immature crop.

The Summer temperature of the water did not drop below 70 degrees and consequently the spawning season was satisfactory and the outlook for future crops is bright.

During the Summer months extensive repairs and alterations were made to the various oyster shipping plants and opening shops and much new equipment was installed.

The oyster companies which are located at Greenport are the Lester & Toner Oyster Co., J. & J. W. Elsworth Oyster Co., the Bluepoints Oyster Co., Shelter Island Oyster Co., American Oyster Co., Sea Coast Oyster Co., Radel Oyster Co., Greenport Oyster Co., and Pell's Sea Food.

### To Limit Size of Haul Seines

Attorney Douglas Brown has been instructed by the Brookhaven Town Board to prepare an ordinance which would limit the size of haul seines to be used in town waters to 250 fathoms.

The new law is designed to protect the resident fishermen from out-of-town operators who are said to use nets 600 fathoms in length. Besides limiting the size of nets, the ordinance will restrict out-of-town fishermen from operating in Brookhaven waters.

### Islip Cove Opened to Clammers

The Bureau of Marine Fisheries of the State Conservation Department has authorized the opening of Islip Cove for the removal of hard clams for transplanting purposes for the period of October 2 to October 13, excluding October 7 and 8.

### Vandals Raid Clam Boats

Vandals went aboard six boats moored at the West St. dock in West Sayville during the night of September 20 and tossed a large amount of clammimg and fishing equipment overboard.

The boats which lost equipment are owned by John Pagels, Adrian Dykstra, Jacob Stein, William Pagels, John Style and Lewis Thompson.

### Releasing Small Fish

(Continued from page 13)

shrimp to pass through, while only 5.5 percent of this same size group escaped from the special net. The 2" mesh net released 5.1 percent of the shrimp of this size.

The next size group, 11.0 to 11.9 centimeters (or 55 to 75 count), was best retained by the 2" net, with 2.6 percent escapement as compared with 6.9 percent and 11.1 percent from the special and large-mesh nets, respectively. The large-mesh net allows escapement of about 50 percent more shrimp of this size group than does the special net. However, more detailed data show that most of the additional escapement occurs among the smaller individuals of the size group (65 to 75 count).

The escapement of shrimp from 12.0 to 12.9 centimeters (or 44 to 55 count) was approximately the same, 2.5 to



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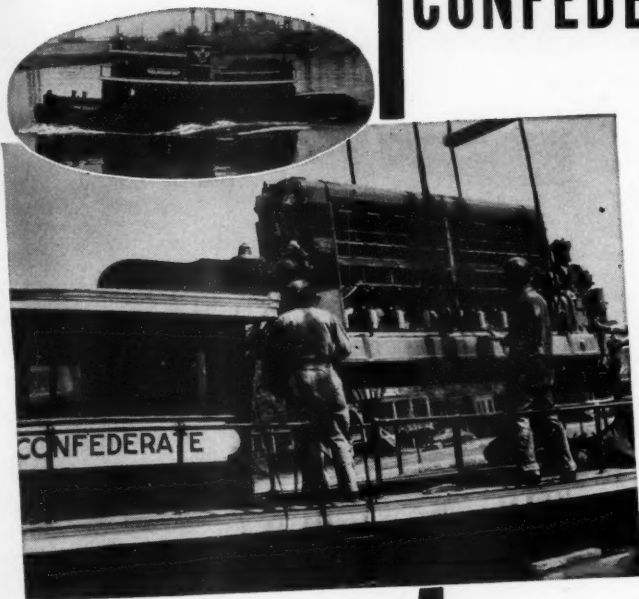
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## *Sister-Blackstone*

3.5 percent, from all three cod ends. None of the nets permitted the release of any shrimp over 13.0 centimeters (under 45 count).

The 2¼" mesh released 59.0 percent and 42.8 percent of the total croaker and spot catch, respectively; the 2" mesh released 24.8 percent and 12.2 percent of these same species. It is apparent that a ¼" increase or decrease in stretched-mesh size results in a considerable corresponding increase or decrease in escapement of small fish. The legal minimum mesh size of shrimp nets is 1¼" stretched mesh—¼" smaller than the smallest mesh used in these experiments.

### Escapement of Shrimp on Weight Basis

Escapement of shrimp on a weight basis also was determined. The special and large-mesh net both released slightly under 5 percent of the shrimp, and the 2" net released 1.7 percent. Escapement, of course, varies with the average size of shrimp being taken, but it was found that the larger mesh sizes do not release sufficient shrimp to represent a significant loss. When the average size is small, more shrimp will escape than when shrimp are "running" large.

The rapid growth rate of the shrimp is well known. If, therefore, small shrimp are not caught or are released, they would require a relatively short time to grow to a more favorable size. For example, 100 lbs. of 100-count shrimp would be equal, about a month later, to 200 lbs. of 50-count shrimp—if they all lived. If it is assumed that mortality is as high as 50 percent in one month, the total weight would remain the same, but the shrimp would be of 50-count rather than 100-count size. A monthly mortality of 50 percent probably is unreasonably high and, therefore, it seems certain that it would be economically profitable to release as large a number of small shrimp as possible.

### Destruction Caused by Nets Now Used

There have been reports from time to time of dead fish covering the surface of large areas of Pamlico Sound during the shrimp season. During the period of this experiment, dead fish were observed on only one occasion when the Institute's boat was dragging in the wake of a boat which had just lifted a net. Another Institute observer spent two days aboard the *Hatteras*, working in and around the main shrimp fleet, and saw no dead fish.

That some destruction occurs must be realized due to the nature of the operation. Small fish are caught, and in some cases, in large numbers. However, many of the fish are not dead and are able to swim away when put back in the water. The actual amount of destruction cannot be determined from studies to date; nor can the effect of this destruction on the croaker, sea trout, and spot fisheries. Catches of these species have shown fluctuations in the past and will undoubtedly continue to do so.

An examination of the catch records in North Carolina, as reported in the Biennial Reports of the Department of Conservation and Development, may serve as a method of studying the effect of shrimping on finfish fisheries.

A comparison of the 1938-1940 catch of the 18 food fish species with the 1946-1948 catch of the same species shows a decline in the latter biennium of 26,552,600 lbs. Over 50 percent of this decrease is due to the decline in the alewife, or herring fishery, a species not affected by the shrimp fishery. The decline in sea trout, croaker, and flounder amounted to 7,500,000 lbs. (these are the only species showing a decrease which might be reduced by the shrimping industry). On the other hand, the catch of spot during the same period showed an increase.

Inasmuch as spot (second only to croaker in numbers taken by shrimpers) showed an increase, and seven species not taken by shrimpers showed a decrease of 19,000,000 lbs. during the heavy shrimping years, it would be difficult to ascribe decreases in finfish to destruction of young by the shrimp industry.

# Equipment and Supply Trade News



Burton C. Sears, who has been appointed assistant regional manager for the southeastern region by Cummins Engine Co., Inc. His headquarters are at 800 Ponce de Leon Ave., N.E., Atlanta, Ga. Sears has been with Cummins for the past several years, having worked in the research and production departments of the Columbus plant and as a sales engineer. He will assist W. G. Turner, regional manager.

## Cummins Expanding Factory Facilities

The largest single expansion at one time in its 30-year history is to be undertaken by Cummins Engine Co., Inc., of Columbus, Ind. Construction of a new building, 200' wide and 480' long, will begin immediately, making available 2.1 acres of land under one roof and adding 92,000 square feet of floor space to the factory facilities.

The new structure, to be known as the Stores Center Building, will become a central storage for all materials and supplies. It also will house quality control and inspection activities and an enlarged department for shipping service parts. Transfer of these activities to the new building will release areas in other buildings for production.

Upon completion of the new building, Cummins will have expended more than \$5,000,000 since the end of World War II for additional manufacturing facilities and for modernizing the Columbus plant. Production capacity has been increased by 60 per cent in a period of five years.

## Wilfrid O. White Has New Sales Headquarters

Wilfrid O. White & Sons, Inc. has announced a change of address of their Boston headquarters from 90 State St. to their factory building at 216 High St. This move consolidates the executive offices with the manufacturing facilities, thereby making it possible to fill customer orders more quickly by direct shipment from the factory.

## Moore Joins Double Seal Ring Co.

M. A. Moore has been appointed sales and service representative for Double Seal Ring Co., of Fort Worth, Texas, in Maine, Vermont and New Hampshire.

Moore comes to Double Seal from General Motors Corp., where he was supervisor of sales and service for General Motors Diesel engines at Houston. Moore's new headquarters are in Georgetown, Maine.

The new Double Seal representative has had a varied background in engineering. During the war he was supervisor of a team of technicians servicing Diesel engines for the Navy in the Pacific.

Moore worked five years in Panama in the operation and maintenance of Diesel dredging equipment. Previously he had experience with the Bath Iron Works as operating engineer.

## Evinrude Announces 25 hp. Outboard

Now in production after a full year of testing in Northern and coastal waters, is Evinrude's new Big Twin model which develops 25 hp. at 4000 rpm. with weight of only 85 pounds. Gearshift control with neutral, forward and

reverse, contributes small-motor manageability and complete maneuverability. Spark and throttle are synchronized with twist-grip control carried to the end of the steering handle.

Evidence of the motor's flexibility and wide power range is the fact that it will throttle smoothly down to normal trolling speed. It has exceptionally high torque at moderate throttle.

The powerhead of the new model is twin cylinder, alternate firing type. Displacement is 37.5 cubic inches. The cylinder block is an aluminum die casting with hard iron sleeves cast in place, and detachable die cast aluminum cylinder heads. The crankshaft of nickel-molybdenum steel is counterbalanced with integrally forged balances. The powerhead is flexibly mounted on special combination synthetic rubber and stainless steel spring mountings.

## New Micro Barometer

A super sensitive aneroid barometer, accurate to 1/1000 inch of mercury, is now available in the new Precision Micro Barometer announced by American Paulin System, 1847 South Flower St., Los Angeles 15, Calif.

With etched graduations reading to 1/1000 inch of mercury, the micro barometer gives instantaneous readings without the necessity of corrections for temperature and latitude. The new instruments are built around an exclusive system of instrumentation that is said to represent the first new principle in Aneroid construction in over 100 years.

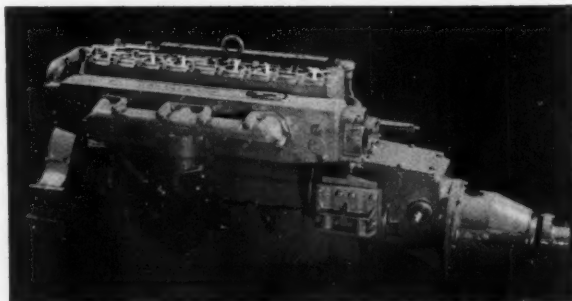
Model PMB-1 Micro Barometer has a range extending from 24.80 inches to 31.00 inches of mercury. Other ranges are available on request. All Micro Barometers are furnished with either wall mounting flange or russet leather carrying case for portable use.

## Scholarships in Naval Architecture

Three individual scholarships have been established by the National Association of Engine and Boat Manufacturers for students of naval architecture and marine engineering at Webb Institute of Naval Architecture, the University of Michigan and Massachusetts Institute of Technology.

Announcement of the scholarships was made by Ralph G. Klieforth, president of Universal Motor Co., Oshkosh, Wis., and chairman of the scholarship committee of the NAEBM.

Klieforth said that the scholarships were established primarily to encourage interest among students of naval architecture in the design and construction of small craft.



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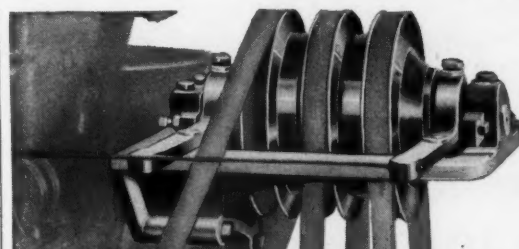


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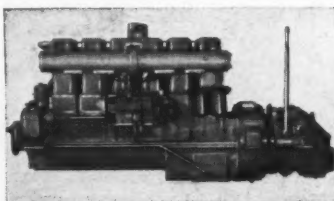
# LATHROP POWERED



New, 55-Foot shrimp trawler powered by the D-100 Lathrop. Owned by John Bolger of Dunedin, Florida.

Here's an engine that will do what you want the way you want it done. It's an engine designed specifically for fishing boat and work boat operators. The D-100 joins the long line of Lathrop engines that has been built to please three generations of men who work on the water.

## The new D-100 Diesel



The Lathrop D-100, a six-cylinder four-cycle marine engine rated at 100 hp. (continuous duty) at 1000 rpm. Weight: 4100 lbs. Bore: 5½". Stroke: 7". Displacement: 998 Cubic Inches. Includes the following items:

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- Lubrication and Fuel Filters
- Oil Cooler • Muffler
- Propeller Half Coupling
- Double V Pulley for auxiliary drive



## Fish Landings

### For Month of September

Hailing fares. Figure after name indicates number of trips.

#### PORTLAND

Agnes & Elizabeth (2)	132,200	Mary & Helen (3)	28,500
Alice M. Doughty (3)	104,700	Nora Sawyer (3)	18,000
Althea (1)	16,800	Notre Dame (2)	85,100
Andarte (3)	179,800	Ocean Clipper (2)	91,000
Annie Louise (5)	38,300	Ocean Wave (2)	102,500
Araho (2)	171,000	Onward (3)	23,100
Belle Isle (2)	81,100	Onward III (1)	6,500
Carolyn & Priscilla (2)	105,900	Powhatan (2)	69,000
Casco (2)	26,100	Queen of Peace (1)	9,000
Cecil W. (2)	66,000	Resolute (3)	85,900
Challenger (3)	7,500	Richard J. Nunan (2)	119,900
Cherokee (2)	140,400	St. Michale (1)	5,100
Clara Louise (2)	99,300	Sea King (3)	79,200
Courier (2)	157,000	Silver Bay (3)	464,400
Crescent (5)	35,800	Theresa (1)	70,000
Elinor & Jean (3)	85,300	Theresa R. (1)	72,000
Ethelina (3)	118,300	Thomas D. (2)	134,900
Evzone (2)	123,800	Vagabond (1)	38,100
Florence & Lucy (2)	214,900	Vandal (2)	144,000
Lawson (2)	76,600	Vida E. (2)	21,300
Lucy Scolia (4)	26,700	Voyager (2)	65,600
Manchinoch (3)	139,100	Willard Daggett (1)	12,700

#### BOSTON

Acme (5)	41,400	Lynn (3)	255,500
Addie Mae (4)	37,200	Mabel Mae (2)	112,900
Adventure (2)	170,500	Maine (3)	431,500
Agatha & Patricia (4)	99,300	Margaret Marie (3)	23,800
Alden (7)	150,500	Maria Del S. (4)	35,100
Alphonso (5)	39,600	Maria Giuseppe (3)	12,000
American Eagle (1)	14,100	Marietta & Mary (2)	49,100
Angie & Florence (2)	44,200	Maria Stella (2)	154,300
Annie & Josie (6)	38,400	Marjorie (3)	22,200
Arlington (1)	112,500	Marjorie Parker (1)	41,000
Assertive (3)	245,100	Marsala (3)	38,600
Atlantic (2)	211,600	Mary & Jennie (6)	39,000
Ave Maria (Dragger) (5)	44,700	M. C. Ballard (2)	152,200
Ave Maria (O. Tr'ler) (3)	197,400	Michael G. (4)	36,300
Barbara C. Angell (3)	288,100	Michigan (3)	252,900
Bay (3)	339,000	Minkette (1)	1,300
Bonnie (3)	452,500	Nancy B. (3)	57,400
Brighton (3)	207,000	Natale III (2)	61,000
Calm (2)	296,500	Neptune (2)	228,200
Cambridge (2)	230,300	North Star (1)	25,000
Capt. Drum (3)	52,500	Nova Antonio (2)	11,200
Carmela Maria (4)	56,900	Nyoda (5)	82,000
Carole June (3)	215,200	Ohio (3)	278,600
Catherine B. (Dragger) (4)	119,700	Olympia (1)	13,200
Catherine B. (L. Tr'ler) (3)	21,200	Olympia La Rosa (4)	165,400
Cigar Joe (2)	18,000	Pam Ann (3)	250,500
Clipper (3)	169,700	Phantom (3)	248,800
Crest (2)	243,000	Pioneer (5)	38,500
Curlew (5)	41,900	Plymouth (4)	394,600
Diana C. (3)	38,700	Princess (2)	15,700
Dorchester (2)	99,000	Quincy (3)	231,000
Drift (2)	280,200	Red Jacket (3)	464,700
Eddie & Lulu M. (2)	5,400	Robert & Edwin (4)	21,700
Elizabeth B. (2)	190,700	Roma (4)	206,400
Esther M. (3)	362,000	Rosalie D. Morse (2)	59,000
Famiglia (2)	39,300	Rosemarie (2)	47,700
Fanny F. Hickey (5)	41,200	Rush (3)	349,800
Flow (3)	302,200	Sacred Heart (3)	15,400
Flying Cloud (3)	382,500	St. Anna (4)	26,500
4-C-688 (1)	3,000	St. Francis (3)	36,400
4-C-370 (4)	22,600	St. Joseph (1)	15,200
4-G-673 (1)	4,600	St. Michael (3)	11,100
4-H-823 (1)	7,100	St. Peter (1)	29,400
Francesca (3)	17,100	St. Peter II (2)	172,000
Gaetano S. (1)	65,200	St. Rosalie (2)	99,000
Geraldine & Phyllis (2)	133,000	San Antonio (3)	17,900
Hornet (4)	18,300	San Calogero (4)	50,100
Ida & Joseph (1)	15,100	Santa Maria (2)	68,600
Iva M. (3)	56,500	Santa Rita (1)	7,100
J. B. Junior (Dragger) (2)	17,700	Santa Rosalia (4)	15,300
J. B. Junior (O. Tr'ler) (3)	290,000	Savoia (4)	29,200
J. B. Junior II (4)	36,000	Six Bros. II (4)	25,400
Jennie & Lucia (1)	17,000	Texas (3)	276,200
Joe D'Ambrosio (3)	21,400	Thomas Whalen (1)	111,700
Josephine (2)	8,700	Triton (2)	254,600
Josephine F. (4)	3,000	Two Pals (4)	28,300
Josephine P. II (4)	88,400	Uncle Guy (1)	31,300
Josie M. (3)	42,200	Wave (3)	459,800
Leonarda (6)	34,300	Weymouth (3)	366,200
Leonard & Nancy (4)	96,100	Wm. J. O'Brien (3)	306,600
Little Joe (3)	17,900	Winchester (2)	186,000
Little Nancy (4)	86,300	Winthrop (3)	352,500
Lorine III (3)	56,400	Wisconsin (3)	502,600
Louise (1)	69,000	Yankee (2)	15,000
Lucky Star (2)	199,300		

#### Scallop Landings (Gallons)

Yankee (3)	850
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#### Swordfish Landings (No. of Fish)

Edith L. Boudreau (1)	102	Evelina M. Goulart (1)	103
Eugenia J. (1)	9	Jorgina Silveira (1)	90

## STONINGTON, CONN.

Alice 2nd (7)	2,900	Mary A. (10)	*4,800
America (11)	37,000	Mary Ann (12)	8,600
Averio (4)	1,600	Mary H. (12)	17,200
Bette Ann (11)	10,400	New England (1)	7,200
Betty Boop (8)	7,400	Old Mystic (11)	12,000
Blackhawk (1)	5,000		33,700
Carl J. (13)	21,000		*14,700
Carol & Dennis (4)	26,100		17,500
Carolyn & Gary (13)	18,800		*59,000
Connie M. (13)	11,500		10,800
	*48,200		22,600
Eleanor (6)	3,800		17,500
Fairweather (12)	17,500		17,500
Fatima (3)	500		200
Five Sisters (2)	3,500		4,900
Harold (10)	5,400		700
Irene & Walter (2)	1,800		21,000
Jane Dore (10)	8,200		11,800
Laura (2)	200		9,200
Lindy (6)	2,800		27,200
Lisboa (11)	8,500		
Mandalay (1)	8,100		
Marise (13)	19,700		

(\* Trash Fish)

## GLOUCESTER

Alden (1)	8,000	Malolo (2)	104,000
Alvin T. Fuller (3)	215,000	Manuel F. Roderick (1)	94,300
American Eagle (2)	57,000	Margie L. (4)	21,000
Anna Guarino (9)	58,000	Margie & Roy (3)	7,000
Anne Marie (1)	6,000	Maria Immaculata (8)	102,500
Annie (8)	46,000	Marie & Winifred (1)	30,000
Annie II (5)	16,000	Marion & Alice (2)	179,000
Ann & Marie (3)	13,500	Mary (6)	56,000
Anthony & Josephine (6)	117,000	Mary F. Curtis (2)	193,000
Ariel (3)	10,000	Mary Jane (2)	215,000
Babe Sears (1)	6,500	Mary & Josephine (2)	376,000
Baby Rose (3)	315,000	Mary M. (1)	20,000
Barbara C. (3)	25,000	Mary Rose (1)	92,000
Benjamin C. (2)	417,000	Mary & Rose (1)	143,000
B. Estelle Burke (2)	110,500	Mary W. (2)	39,000
Bethulia (5)	108,000	Mellena II (4)	31,000
Billy Boy (1)	16,000	Mocking Bird (1)	78,000
Bobby & Jack (1)	30,000	Mother Ann (2)	211,000
Bonaventure (2)	290,000	Nancy F. (4)	58,500
California (4)	47,500	Natalie III (5)	90,000
Capt. Drum (4)	46,000	Natalie B. (2)	7,000
Cara Cara (1)	135,000	Noah A. (3)	17,000
Carlo & Vince (7)	197,000	North Sea (1)	35,000
Carol Ann (2)	281,000	North Star (2)	67,500
Caroline & Mary (2)	319,000	Nova Luna (2)	21,000
Caspian (2)	66,000	Novelty (7)	40,500
Catherine (4)	27,500	Nyanza (2)	7,000
Catherine Amirault (2)	48,500	Nyoda (4)	15,000
Chanco (2)	290,000	Olivia Brown (3)	118,000
Charlotte M. (1)	41,500	Paul Howard (2)	262,000
Chebeague (4)	49,000	Philip & Grace (2)	253,000
Cigar Joe (3)	37,000	Phyllis & Mary (3)	60,000
Columbia (2)	394,000	Pilgrim (2)	367,000
Conquest (2)	227,000	P. K. Hunt (1)	105,000
Curlaw (3)	463,000	Pollyanna (2)	217,000
Dale (2)	6,000	Positive (2)	299,000
Dartmouth (2)	197,000	Priscilla (4)	19,500
Dawn (5)	31,000	Providence (3)	31,000
Dolphin (4)	425,500	Puritan (2)	328,000
Doris F. Amoro (2)	47,500	Raymonde (3)	133,000
Doris H. (4)	37,000	R. Eugene Ashley (2)	73,000
Eastern Point (4)	100,000	Rita B. (3)	157,500
Eleanor (4)	54,000	Robert & Edwin (1)	2,500
Eleanor Mae (3)	17,000	Romerly (1)	9,000
Emily Brown (2)	320,000	Ronald & Mary Jane (2)	323,000
Estrela (2)	415,000	Rose & Lucy (4)	61,500
Eva II (4)	24,000	Rosemarie (6)	64,500
Falcon (6)	54,500	Rosemarie V. (1)	36,000
Felicia (1)	220,000	Rose Mary (4)	27,000
Frances R. (3)	69,000	Rosie & Gracie (7)	115,500
Francis McPherson (2)	308,000	Sacred Heart (4)	34,500
Frankie & Jeanne (5)	22,700	St. Anthony (2)	240,000
Frankie & Rose (3)	20,000	St. John (2)	9,000
Frederick H. (2)	57,000	St. Joseph (2)	60,000
Gaetano S. (1)	69,000	St. Nicholas (2)	305,000
Gertrude E. (6)	21,500	St. Peter (2)	37,000
Golden Eagle (2)	262,000	St. Peter II (1)	24,500
Gudrun (2)	338,500	St. Providence (6)	57,000
Hazel B. (1)	115,000	St. Victoria (1)	102,000
Helen M. (1)	60,000	Salvatore & Grace (2)	87,000
Hilda Garston (2)	252,000	Sandra Lee (1)	2,000
Holy Family (3)	213,000	Santa Lucia (7)	50,000
Ida & Joseph (3)	74,000	Santa Maria (1)	11,000
Immaculate Conception (2)	24,000	Sea Hawk (3)	162,000
Irma Pauline (1)	20,000	Sea Queen (1)	50,000
Irma Virginia (4)	31,500	Sea Rambler (1)	55,000
Isabelle J. II (3)	10,000	Sea Roamer (1)	21,000
Jackie B. (5)	132,000	Sebastiana C. (3)	102,000
Jackson & Arthur (8)	75,000	Serafina II (2)	67,000
J. B. Junior (9)	154,000	Serafina N. (8)	214,000
Jennie & Julia (3)	24,500	Skilligolee (2)	78,500
Jennie & Lucia (3)	61,500	Soi (2)	69,000
Joe D'Ambrasio (1)	9,000	Sunlight (2)	323,000
Johnny Baby (8)	33,000	Sylvester F. Whalen (2)	328,000
Joseph & Lucia (2)	69,000	The Albatross (1)	155,000
Josie II (4)	34,500	Theresa M. Boudreau (2)	365,000
Julie Ann (1)	170,000	Thomas J. Carroll (1)	90,000
Killarney (1)	182,000	Tina B. (2)	210,000
Kingfisher (1)	144,000	Trimembral (7)	69,000
Kurtia (1)	2,000	Viola D. (7)	76,000
Lady of Good Voyage (2)	147,000	We Three (6)	34,500
Lasseghn (5)	15,000	Whitstone (2)	102,000
Little Flower (8)	179,000	Win Story (4)	115,000
Lou Sam (2)	2,000	Yankee (6)	29,000
Madame X (3)	14,000		

## Swordfish Landings (No. of Fish)

Babe Sears (1)	4	Olivia Brown (1)	4
Evelyn G. Sears (1)	51		



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## MORE FISH

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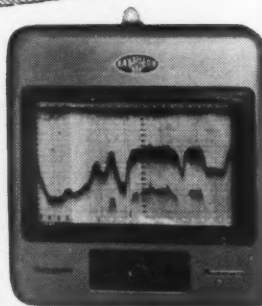
Designed for small fishing craft, Fathometer Jr. recording model, shows you where fish abound . . . the size of the school . . . depth below the keel. It will increase your catches and profits. The permanent records enable you to get back to the best grounds. It saves nets and gear . . . provides safety for boat and crew. Investigate the recording Fathometer Jr. today.

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RAYTHEON MANUFACTURING COMPANY  
Dept. 6460-A, Waltham 54, Massachusetts



## NEW YORK

Black Hawk (1)	5,000	Mary (1)	192,500
Felicia (2)	108,000	Sally & Eileen (1)	59,600
Magellan (1)	29,900		

### Scallop Landings (Gallons)

Antonina (1)	600	Mary K. (1)	200
Beatrice & Ida (2)	1,400	Midway (1)	800
Benjamin Bros. II (1)	675	New Dawn (2)	2,200
Bright Moon (3)	1,550	Norseman (1)	1,000
Buzz & Billy (3)	3,300	Olive M. Williams (1)	1,100
Catherine C. (2)	2,025	Peerless (1)	450
Charlotte (1)	600	Phyllis J. (2)	2,100
David A. (1)	1,100	Rainbow (2)	2,000
Falcon (1)	700	Reid (2)	1,230
Florence B. (2)	2,225	Richard Lance (2)	1,325
Friendship (3)	2,150	Rockaway Belle (2)	1,280
Gloria F. (3)	2,120	Rosalie F. (3)	3,025
Gud Kay (2)	775	S #31	900
Hazel S. (2)	930	St. Rita (2)	1,100
Jenny (1)	950	Sea Gull (1)	175
Malvina B. (1)	1,000	Sunapee (2)	1,250
Mary (1)	650	Victoria (2)	1,025
Mary Ellen (1)	600		

## NEW BEDFORD

Adventurer (5)	78,500	Katie D. (1)	47,300
Alva (1)	2,500	Kelbarsam (2)	30,500
Angeline (1)	3,300	Liberty Belle (1)	14,400
Anna C. Perry (3)	32,900	Madeline (3)	24,900
Annie Louise (2)	10,900	Maria-Julia (3)	38,000
Annie M. Jackson (2)	60,600	Mary, Hayes (3)	182,800
Arnold (2)	32,500	Mary & Joan (4)	200,300
Arthur L. (3)	90,500	Mary & Julia (1)	40,500
Austin W. (3)	67,100	Mary M. (1)	16,000
Cape Cod (4)	58,400	Meta & Margaret (2)	63,200
Capt. Deebold (3)	44,000	Minnie V. (3)	42,000
Carol & Dennis (1)	12,500	Molly & Jane (3)	31,400
Carole June (1)	49,500	Noreen (3)	138,600
Catherine T. (2)	75,800	Pauline (3)	122,000
Chas. E. Beckman (4)	50,800	Pauline H. (4)	244,600
Connie F. (2)	61,700	Penguin (3)	60,400
C. R. & M. (2)	35,200	Phyllis J. (3)	12,800
Dauntless (3)	53,500	Plymouth Belle (3)	61,100
Driftwood (4)	26,400	Princess (1)	17,000
Ebenezer (1)	1,600	Reliance (3)	9,100
Elva & Estelle (3)	36,100	Rita (1)	11,000
Elva L. Beal (1)	9,300	Roann (2)	44,500
Etta K. (1)	15,000	St. Ann (2)	86,300
Eugene & Rose (2)	53,000	Sally & Eileen (1)	4,000
Eunice-Lillian (3)	92,200	Sea Fox (5)	81,500
Fred Henry (1)	17,000	S. M. Murtosa (1)	6,500
Gannet (2)	107,500	Solveig J. (3)	163,100
Gladys & Mary (2)	84,800	Southern Cross (1)	22,000
Gloucester (2)	58,100	Stanley B. Butler (4)	234,100
Growler (3)	98,500	Susie O. Carver (1)	9,100
Gussie B. (4)	8,400	Teresa & Jean (2)	91,500
Helen B. (3)	67,500	Theresa (Conn.) (1)	12,500
Hope (4)	29,600	Three Pals (2)	24,300
Invader (1)	17,500	Two Brothers (Conn.) (1)	5,500
Ivanhoe (3)	78,500	Two Bros. (NBD) (3)	46,500
Jacintha (3)	171,300	Two Bros. (R.I.) (1)	23,000
Janet Elise (2)	16,200	Venture 1st (3)	98,500
Jessie M. Dutra (1)	1,200	Victor Johnson (2)	58,800
J. Henry Smith (2)	5,600	Viking (Chilmark) (1)	3,700
Jimmy Boy (4)	50,100	Viking (4)	153,900
Joan & Tom (4)	63,900	Virginia (2)	87,500
Joan & Ursula (4)	163,900	Whaler (3)	140,200
John G. Murley (2)	104,800	Winifred M. (1)	10,700
June Bride (2)	26,000		

### Scallop Landings (Gallons)

Abram H. (2)	2,250	Linus S. Eldridge (2)	2,250
Adele K. (2)	2,250	Louis A. Thebaud (2)	2,070
Agda (3)	2,480	Lubenray (2)	2,250
Alice J. Hathaway (2)	1,840	Malene & Marie (3)	2,850
Alpar (2)	1,890	Marie & Katherine (3)	2,425
Anna (1)	700	Marmax (2)	2,260
Antonina (2)	1,692	Martha E. Murley (3)	2,175
Antonio (1)	1,025	Mary Anne (3)	3,405
Barbara (1)	1,025	Mary Canas (2)	2,069
Barbara M. (3)	2,561	Mary E. D'Eon (2)	2,150
Bobby & Harvey (1)	1,025	Mary J. Landry (2)	1,770
Bright Star (3)	2,947	Mary R. Mullins (2)	1,700
Camden (1)	1,080	Mary Tapper (2)	1,678
Carol & Estelle (3)	1,822	Moonlight (3)	3,224
Catherine & Mary (3)	2,650	Muriel & Russell (1)	1,025
Charles S. Ashley (2)	1,681	Nancy Jane (1)	1,125
Christina J. (2)	1,675	Newfoundland (2)	1,975
Daggy (3)	2,375	Pearl Harbor (2)	1,875
Doris Gertrude (2)	2,025	Pelican (2)	2,250
Dorothy & Mary (2)	1,775	Porpoise (2)	1,725
Edith (1)	700	Red Start (3)	3,333
Elizabeth N. (3)	3,105	Ronald & Dorothy (2)	935
Fairhaven (3)	3,150	Rose Jarvis (1)	100
Flamingo (2)	2,300	Sea Hawk (2)	1,181
Fleetwing (3)	3,028	Sea Ranger (2)	1,865
Francis J. Manta (3)	2,806	Shannon (2)	1,608
Irene & Mabel (2)	1,725	Smilyn (2)	1,550
Janet & Jean (2)	1,458	Sonny & Joyce (3)	330
Jennie M. (2)	245	The Friars (2)	1,950
Jerry & Jimmy (3)	3,375	Theresa A. (1)	1,165
Josephine & Mary (2)	2,250	Ursula M. Norton (2)	2,250
Julia K. (2)	1,110	Virginia & Joan (2)	1,403
Kingfisher (2)	1,825	Wamsutta (3)	3,150
Lainee K. (3)	2,575	Wm. D. Eldridge (2)	2,250
Liboria C. (2)	1,400	Wm. H. Killigrew (3)	2,784

### Swordfish Landings (No. of Fish)

Anastasia E. (1)	31	Winifred M. (1)	43
Jimmy Boy (1)	1		



## Virginia Bans Out-of-State Sale of Seed Oysters

Feeling that the supply of oysters in the James River seed beds is needed for State oyster planting, the Virginia Commission of Fisheries has passed an order banning the sale of seed oysters to be taken out of the State. This action was taken following a public hearing in Newport News on September 27.

Investigation had shown a depletion of the seed beds and the Commission acted under a Virginia statute granting it authority to issue permits to carry seed oysters out of the State.

The order stopping removal of seed oysters from the State of Virginia will be in effect for the present oyster season, but is subject to change without notice.

### Oyster Tonging Season Starts

The oyster season in Virginia has begun. The Potomac rocks were opened on the 15th of September; while those in the Rappahannock and James Rivers opened on the first of October. In Tangier waters only one rock will be opened for tonging in October, and that is Hurley's, just below the Maryland-Virginia line, where there are still a few oysters.

About 40 Tangier tongers were expected to sail for the Rappahannock early this month where they will tong until Christmas.

### Good Month for Gilling

Gilling was good during the month of September, with most of the Tangier fishermen working the mouth of the Wicomico River on the Western Shore of Virginia. Some good catches, averaging about 500 spot to the giller per night, were made in this area. The biggest haul of the month was made by Capt. Frank Pruitt, who is reported to have landed 1,500 Norfolk spot in one night's fishing.

### Cod Harbor Being Planted with Seed Oysters

Henry Jander of Tangier has leased Cod Harbor at the southern end of Tangier Island from the Virginia Commission of Fisheries for oyster farming. He will start planting seed oysters on the grassy bottoms of this body of water soon, and will employ Capt. Leland Wheatley to oversee the oyster farm.

### Fishing Boat Explodes

Eight members of a fishing party from Richmond and Capt. John Conrad of the fishing boat *Martha Virginia* had a narrow escape on September 3 when an explosion wrecked the front cabin and bow of the boat in the Rappahannock River near Grey's Point.

Marion Reynolds, Linwood Tellis and Robert Blake, captains of boats nearby, rushed to the scene of the explosion and helped rescue the members of the fishing party, three of whom had been blown into the water by the force of the blast.

### Dedication of Fisheries Laboratory

A formal dedication and open house was held at the new quarters of the Virginia Fisheries Laboratory at Gloucester Point on October 12. The facilities and research methods of the new laboratory were displayed and demonstrated, and in addition, the hydrographic research vessel *Maury* of the associated Chesapeake Bay Institute was on demonstration.

The dedication and open house was followed by a two-day meeting sponsored by the Atlantic Estuarine Research Society featuring a symposium on estuarine ecology, which is the interrelationship of living animals in the tidal zone, such as oysters and clams.

### Hampton Roads Landings

A drop of 279,000 lbs. was shown in the Hampton Roads area fish landings for September as compared to those of September, 1949. However, the 1,128,500-lb. September catch was 221,000 lbs. larger than that of August. Ninety per cent of the landings were taken in pound nets, and the 355,100-lb. croaker catch accounted for the largest part of the month, with the spot take of 193,400 lbs. in second position.

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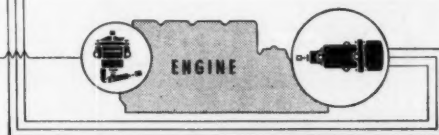
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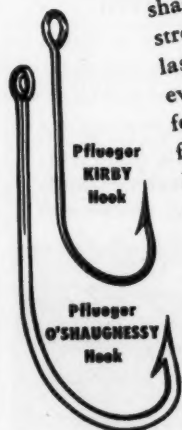
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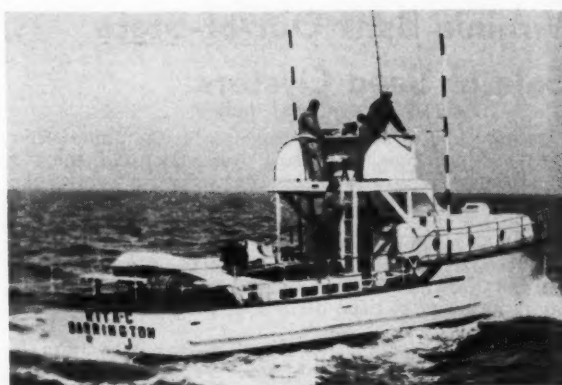
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The "Rita-C", 42' party boat which sails from Rafferty's Cape May Marina, Cape May, N. J. Owned and operated by Capt. Vitold J. Chludzinski, she has Northill anchor, uses Gulf lubricating oil, and is painted with International paint.

## Use of Loran

(Continued from page 15)

operator to observe the signals of both stations continuously during transmission. As a consequence, the man on watch at either station of a pair is in a position to "double check" for the existence of any fault that might occur in the signal of either station.

Loran transmissions can be momentarily at fault due to many possible causes such as electrical failure of a part of the equipment or operating error in manipulating controls. Even though these troubles may be minor and of relatively short duration, it is essential that the navigator be acquainted with the failure instantly and positively. In order to do this, a blinker device is switched in at either of the two stations. "Blinking" produces a characteristic movement of the transmitted signals, which is easily recognizable and serves to warn the navigator that the signals are not to be used for navigational purposes until the "blinking" ceases.

In the event the failure is sufficiently serious to prevent transmission entirely from one of the paired stations, it would not be possible for the navigator to misinterpret the Loran signals, inasmuch as the presence of only one of the expected signals on the air would preclude making any time difference measurements at all from that particular pair. Other pairs would not be affected.

Because of the fundamental checks which are vigilantly maintained on the transmitted Loran signals, the navigator at sea is assured that any transmissions which he receives, with the exception of "blinking" signals, are accurate, reliable electronic guideposts marking the lines of positions of this modern long-range navigational aid.

### Transmitting Station Functions

Because Loran is concerned with the measurement of radio signals from two different sources, Loran stations operate in pairs. The function of each station of a Loran pair is somewhat different from that of its companion station, and each is given a designation which is descriptive of the role which it performs, namely, "master" station and "slave" station.

The "master" starts the cycle of transmission by sending out a pulse of radio energy which is radiated in all directions including that of both the navigator and the "slave" station. After traveling the distance between the two transmitting stations, known as the "base line," the pulse transmitted by the "master" arrives at the "slave". This signal is received by means of the Loran equipment of the "slave" station and the time of its arrival is used by the "slave" as a reference for the transmission of its own signal.

After the "slave" transmits its pulse, the entire cycle is repeated again and again. Thus the "master" station "sets the pace" and the "slave", by following, completes the Loran transmitting cycle.

## New Jersey Clam Output Shows Steady Growth

A fleet of over 30 large commercial boats are dredging clams for the Wildwood, N. J., clam cannery operated by F. H. Snow Canning Co. of Maine. The Company has doubled the floor space of its Wildwood plant and added \$50,000 worth of new machinery. The former Wildwood Airport Administration building has been acquired as warehouse space. William Kleb is manager of the plant, which now employs 200 people in the canning of chopped and minced clams.

The Snow Company is using its *Huckleberry Finn*, skippered by Capt. Peter Erlensen, ex-Long Islander, as a research boat.

The clam business in the Cape May-Wildwood area, which became a sizable operation last November with the opening of the Snow plant, has shown steady growth. The clammers dredged continuously until early in August when they tied up for a few weeks before the new season started in September.

O. A. Huf Fish Co. of Wildwood has 8 boats in the clam fleet, while the O. K. Fishermen's Association of Wildwood has 5 boats. Wildwood Harbor Market Dock has a fleet of 8 boats operating for the clam cannery. Cape May's Schellenger's dock has a fleet of 8 clam boats, while Lund Fisheries of Cape May are operating 3 boats for the Snow firm.

Among the clam boats working for the Snow plant are the *Sea Gull*, Capt. Frank Spiegel; *Kismet*, Capt. Bob Brown; *Njord*, Capt. Torval Thompson; *Fay Joan*, Capt. Einar Lind; *Patsy*, Capt. Herman Hansen; *Howard Harris*, Capt. Ben Lalind; *Clipper*, Capt. Aksel Olsen; *Carla*, Capt. Karl Svard; *Adjo Grasce*, Capt. Robert Knorr; *Olsen*, Capt. John Olsen; *Penn Sno*, Capt. Herbert Reinersman; *Betty Hansen*, Capt. Ernest Rodenberg; *Hermilane*, Capt. Arthur Olsen; *Sea Bird*, Capt. Carl Hokanson; *Elizabeth*, Capt. Andrew Sorenson; *Anna S.*, Capt. Kenneth Shivers; *Fanny E.*, Capt. Gus Peterson; *Elizabeth C.*, Capt. John Carlson, all of Wildwood; the *Success*, Capt. Dave Bateman; *Hilda and Mabel*, Capt. William Lund; *William and Warren*, Capt. Clifford Chew; *Osric*, Capt. Dave Gallagher; *Marlin*, Capt. Fenton Yearicks; *Martha*, Capt. John Wilkensen; *Jo Hannah*, Capt. Oliver Jensen, of Cape May; the *Mary N.*, Capt. Charlie Whilden of Cedarville; and the *Kingfisher*, Capt. Jack Beringer of Manasquan.

### Dragger "North Cape" Launched

A new 74' dragger, the *North Cape*, was scheduled to be launched the early part of September at Cape May. She is owned by Capt. Arnt Jensen and Harry J. Mogck, and will be powered by an 8-cylinder, 265 hp. Enterprise Diesel with 2:1 reduction gear, turning a 54 x 41 Columbian propeller.

The new vessel is heavily built, having 3" double sawn oak frames, 10" oak keel, 2 1/4" yellow pine planking and 2 1/2" cedar decking.

Equipment on the dragger includes a Bodine & Dill (Hettinger) winch, 8 hp. Lister-Blackstone auxiliary Diesel, Bendix depth recorder and 50-watt Ray Jefferson radiotelephone.

### New Jersey Seafood Week

New Jersey Seafood Week was held during the week of September 10, at which time the oyster season was officially opened.

Commercial fishermen took an active part in this seafood festival by sponsoring a "Seafood Princess" who represented the state at the National Seafood Festival in Hampton, Va. on September 14-16.

This year's winner was Florence Cooper of Point Pleasant who was named Miss New Jersey Seafood Princess for 1951.

Her entry in the 1950-51 contest was sponsored by William A. Simpson, Jr., a commercial fisherman of Point Pleasant.

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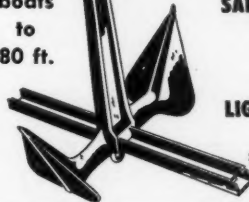
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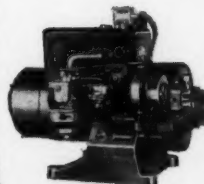
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## Vineyard Bailings' Allen

### On Vacation

The first word from vacationing Joseph C. Allen, of the Martha's Vineyard Gazette staff, to the rest of the gang was written at sea, appropriately enough for the "Wheelhouse Loafer." We are relaying it to his Atlantic Fisherman followers.

Six days out and three more to go as I write this. We cut the parallel that crosses the tip of Iceland this noon and had logged 442 miles in the past twenty-four hours. The *Stockholm* makes about 19 knots, but for the first four days we had a notheaster that slowed her down some.

The voyage up to now has not been eventful. We are registered for 400 passengers, but we have only 300 aboard. In the tourist class, which is us, it is a family party, "Grandpa Hans, Aunt Christine, Peter and the baby," and that's the truth. The majority of the passengers are Swedes, with a few Danes and Finns, and fewer Americans.

Still, they are not all strangers. One old-timer, with a master's license, used to put into Vineyard Haven in his schooner. He remembers the Bethel. His name is Anderson. A nurse, also Danish, has summered on the Vineyard, and there is a cousin of Fred Remington aboard, by the name of Peabody, and bound for Copenhagen to attend school.

#### All Things to All Men

Thus far I have been taken for a scientist, a retired army officer, a clergyman, and I suspect, a Communist, by reason of the approach. Probably because of the bright red shirt that I have worn a good deal.

The *Stockholm* is a motor ship. She looks like a yacht and is appointed like one but, so help me, I have never seen anything so uneasy in my life! An ordinary foul weather forecast for 40 hours ahead will start her rolling and she rolls down to better than 40 degrees. If we should hit a storm I don't know what would happen. Fortunately the heaviest weather up to now was logged as a moderate gale.

I spent all last night hauling myself back into my bunk, and it's too damned strenuous for anyone past 50! Despite the good food and abundance, I feel that I have lost weight; it has just been rolled off.

This will be all for now. Will write again when we land. It is a lonely ocean and a restless one, but the ship keeps you from brooding. All the best.

#### Bulletin No. 2

Bulletin No. 2 is postmarked Copenhagen. Thought I should let you know that we landed safely, and here we are. It was just like Old Home Week when we came in. Only three persons in Copenhagen knew us, but the whole city turned out, except those engaged in vital industries. Have been eating and sightseeing and eating, especially eating, ever since, and am about to sight-see some more.

The National Museum people do not enthuse over our cromlech. They say it's the real McCoy all right, but belongs to the Stone Age. They say the digging beneath probably didn't go deep enough. At the same time they agree that our theory has merit because proper material for regular tombs was not available. Did you realize that pre-historic "giants" were little fellows? They were. I saw a few, about 4,000 years old.

I like sleeping under a down quilt, and weather that clears before 11 a.m., even if it rains pitchforks at 10. If I could navigate, I'd be tempted to buy a pilot boat and sail her home, but I guess that's out. Hope that no one is working himself (or herself) into an early grave because of my absence. More than ever, I feel that I shall have to rest after this trip.

## Canadian Report

By C. A. Dixon

Of much interest to fishery circles, and all shipping avenues, is the establishment of a new lightship at the Lurcher Shoal off the Yarmouth coast, to guide sea-going ships through the dangerous region. The lightship is in command of Capt. L. L. Mallet of Saint John, N. B.

The lightship is 128' long and 30' wide, and is of rugged design to hold a firm station in the stormy and rough area where she is to ride day and night for long periods. The vessel is extensively electrified, and is the first of its kind to operate on alternate current instead of direct. The galley is heated by electricity.

Special equipment consists of four light beacons mounted on the foremast at 57' above sea level, a fog horn, radio beacons, direction finder, fire-fighting equipment, motor-driven lifeboats, and other life-saving equipment.

### Waiting for Pollock

Fall landings of pollock form an important part of the line fishing industry at Campobello every year. During the Summer there were great quantities of pollock in Quoddy River, and many were caught by line fishermen and in sardine weirs; but in October the fish are reported very scarce. Fishermen say they have left their regular haunts to chase herring, squid and hake, and this belief is substantiated by the fact that pollock are seen "eating the rocks" in weir fishing areas and elsewhere. Fishing for pollock in October and sometimes in November has been a traditional calling for Quoddy fishermen. The fish are exceptionally fleshy and can be adapted particularly to the curing of slack-salted pollock.

### Sardine Production Depends on Size

After a Summer of unprecedented quantities of sardines all along the Maine and New Brunswick coasts, it looks as if Fall production will be sub-normal. Already there are signs that the overall catch of real sardines may be small. Some fish suitable for canning are available in Charlotte County, but in many places the fish are still too large for the requirements of the packers. Some Canadian sardine factories will continue to pack fish, and some of the plants will be operated all Winter if fish of suitable size can be procured.

One Canadian sardine cannery will need a lot more fish to fill its requirements for 1950. The firm intends to pack 200,000 more cases, if fish can be procured, to make up for the big shortage in the annual pack caused by extreme scarcity of sardines the first half of the year.

### Expect Bumper Harvest of Oysters

Oyster fishing methods which have prevailed in the Shippegan and Mirimichi area in New Brunswick have been replaced this year in some instances with modern dredging. The fishermen are expecting a bumper harvest as a result of this change. The Province of New Brunswick led all Canadian oyster production before the introduction of the dredge. While it is true that seed oysters are fewer this year than last, the fact is that 5,000,000 seed oysters taken last year will more than compensate for this year's smaller quantity, possibly 2,000,000, fishermen and authorities agree. The striking increase in the oyster yield this year is attributed to the growth of privately leased grounds, of which there are over 300 in the Shippegan-St. Simon area alone. In 1936 Gloucester County produced 300 barrels of oysters, and in 1949 it produced 12,000 barrels. In 1948 New Brunswick forged ahead of competing Provinces when it produced a record harvest of 7,000,000 lbs., and this practically was repeated in 1949. Fishing on private grounds began the last of August, and on public grounds September 25. The dredge is used on private grounds only. It is of the type used by Long Island Sound fishermen.

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Companies whose names are starred (\*) have display advertisements in this issue; see Index to Advertisers for page numbers

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\*Danforth Anchors, 2121 Allston Way, Berkeley, Calif.

\*Northill Co., Inc., Los Angeles 45, Calif.

## BATTERIES—STORAGE

"Exide": Electric Storage Battery Co., Allegheny Ave. and 19th St., Philadelphia, Pa.

\*Surrette Storage Battery Co., Salem, Mass.

Willard Storage Battery Co., Cleveland, O.

## BOOTS

United States Rubber Co., Rockefeller Center, New York, N. Y.

## CANS

Continental Can Co., 100 E. 42nd St., New York, N. Y.

## CLOTHING

J. F. Carter Co., Beverly, Mass.

H. M. Sawyer & Son Co., East Cambridge, Mass.

United States Rubber Co., Rockefeller Center, New York, N. Y.

## COLD STORAGE

Quaker City Cold Storage Co., Philadelphia, Pa.

## COMPASSES

E. S. Ritchie & Sons, Inc., 112 Cypress St., Brookline, Mass.

\*Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

\*Wilfrid O. White & Sons, Inc., 216 High St., Boston 10, Mass.

## CORDAGE

American Manufacturing Co., Noble and West Sts., Brooklyn, N. Y.

\*Columbian Rope Co., Auburn, N. Y.

\*The Edwin H. Fittler Co., Philadelphia 24, Pa.

\*New Bedford Cordage Co., 131 Court St., New Bedford, Mass.

\*Tubbs Cordage Co., San Francisco, Calif.

## DEPTH FINDERS

Bendix Aviation Corp., Pacific Div., 475 Fifth Ave., New York 17, N. Y.

\*Bludworth Marine, 92 Gold St., New York 7, N. Y.

Kaar Engineering Co., Palo Alto, Calif.

\*Submarine Signal Division, Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.

\*Wilfrid O. White & Sons, Inc., 216 High St., Boston 10, Mass.

## DIRECTION FINDERS

\*Bludworth Marine, 92 Gold St., New York 7, N. Y.

Kaar Engineering Co., Palo Alto, Calif.

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

\*Submarine Signal Division, Raytheon Manufacturing Co., 138 River St., Waltham 54, Mass.

## ENGINE CONTROLS

\*Westinghouse Air Brake Co., Wilmerding, Pa.

## ENGINES—DIESEL

The Buda Co., Harvey, Ill.

Caterpillar Tractor Co., Peoria, Ill.

Cleveland Diesel Engine Div., General Motors Corp., 2160 W. 106th St., Cleveland 2, Ohio.

Cooper-Bessemer Corp., Mount Vernon, O.

\*Cummins Engine Co., Columbus, Ind.

\*Cummins Diesel Engines of New England, Inc., 18 Hurley St., Cambridge 41, Mass.

\*Cummins Diesel Sales and Service of New York, Inc., 1030-1044 Leggett Ave., New York 55, N. Y.

\*Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23, Michigan.

\*The Edson Corp., 49 D St., South Boston, Mass.

\*Enterprise Engine & Foundry Co., 18th and Florida Sts., San Francisco 10, Calif.

Fairbanks, Morse & Co., Chicago, Ill.

Flagship Engine Co., Lynch Cove, Baltimore 22, Md.

Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.

\*The Lathrop Engine Co., Mystic, Conn.

\*Lister-Blackstone Inc., 420 Lexington Ave., New York 17, N. Y.

\*Murphy Diesel Co., 5317 West Burnham St., Milwaukee, Wis.

\*Nordberg Mfg. Co., Lincoln Bldg., 60 East 42nd St., New York 17, N. Y.

Osco Motors Corp., 36-27 Lawrence St. North, Philadelphia 40, Pa.

The Palmer Bros. Engine Corp., River Road, Cos Cob, Conn.

\*H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.

\*Perkins-Eaton Machinery Co., 376 Dorchester Ave., South Boston 27, Mass.

Red Wing Motor Co., Red Wing, Minn.

Scripps Motor Co., 5817 Lincoln Ave., Detroit 8, Mich.

Wolverine Motor Works Inc., 1 Union Ave., Bridgeport, Conn.

Worthington Pump & Machinery Corp., 421 Worthington Ave., Harrison, N. J.

## ENGINES—GASOLINE

\*Chris-Craft, Marine Engine Div., Algonac, Mich.

Chrysler Corp., 12211 East Jefferson, Detroit, Mich.

Flagship Engine Co., Lynch Cove, Baltimore 22, Md.

Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.

\*The Lathrop Engine Co., Mystic, Conn.

\*Nordberg Mfg. Co., Lincoln Bldg., 60 East 42nd St., New York 17, N. Y.

Packard Motor Car Co., 1580 E. Grand Blvd., Detroit 32, Mich.

The Palmer Bros. Engine Corp., River Road, Cos Cob, Conn.

Red Wing Motor Co., Red Wing, Minn.

Scripps Motor Co., 5817 Lincoln Ave., Detroit 8, Mich.

\*Universal Motor Co., 436 Universal Drive, Oshkosh, Wis.

## FISHING GEAR

\*F. J. O'Hara Trawling Co., 211 Northern Ave., Boston 10, Mass.

\*Westerbeke Fishing Gear Co., Inc., 279 Northern Ave., Boston, Mass.

## FISH MEAL MACHINERY

Enterprise Engine & Foundry Co., Process Machinery Div., 18th and Florida Sts., San Francisco, Calif.

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New England Fishing Gear Co., 301 Eastern Ave., Chelsea, Mass.

J. H. Shepherd Son & Co., 1820 East Ave., Elyria, Ohio.

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Osco Motors Corp., 36-27 Lawrence St. North, Philadelphia 40, Pa.

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\*Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W Outer Drive, Detroit 23, Michigan

\*Lister-Blackstone Inc., 420 Lexington Ave., New York 17, N. Y.

\*D. W. Onan & Sons, Inc., Minneapolis 5, Minn.

\*Universal Motor Co., 436 Universal Drive, Oshkosh, Wis.

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The Imperial Electric Co., Akron, Ohio.

\*D. W. Onan & Sons, Inc., Minneapolis 5, Minn.

## HOOBS

Bill DeWitt Div., Hook Mfrs., Auburn, N. Y.

\*O. Mustad & Son, Oslo, Norway.

\*"Pflueger": Enterprise Mfg. Co., 110 Union St., Akron, Ohio.

## ICE BREAKERS

Gifford-Wood, Hudson, N. Y.

## LORAN

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

\*Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

## NETS

\*W. A. Augur, Inc., 35 Fulton St., New York, N. Y.

\*R. J. Ederer Co., 540 Orleans St., Chicago, Ill.

The Fish Net & Twine Company, 310-312 Bergen Ave., Jersey City, N. J.

\*The Linen Thread Co., Inc., 105 Maplewood Ave., Gloucester, Mass.

\*A. M. Starr Net Co., East Hampton, Conn.

## OIL—LUBRICATING

\*Esso Standard Oil Co., 26 Broadway, New York 4, N. Y.

\*Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.

Socony-Vacuum Oil Co., Inc., Marine Sale Dept., 26 Broadway, New York 4, N. Y.

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\*Advanced Marine Products Corp., 211 Northern Ave., Boston 10, Mass.

## PAINTS

Amercoat Division, P.O. Box 3428, Terminal Annex, Los Angeles 54, Calif.

Hart and Burns Inc., Riverside, Calif.

Henderson & Johnson, Inc., Gloucester, Mass.

International Paint Co., Inc., 21 West St., New York, N. Y.

Pettit Paint Co., Belleville, N. J.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Tarr & Wonson, Ltd., Gloucester, Mass.

C. A. Woolsey Paint & Color Co. Inc., 229 East 42nd St., New York 17, N. Y.

## POWER TAKE-OFFS

\*Albina Engine & Machine Wks., 2100 N. Albina Ave., Portland, Oregon

## PROPELLERS

\*Columbian Bronze Corp., Freeport, N. Y.

\*Federal Propellers, Grand Rapids, Mich.

F. Ferguson & Son, 1132 Clinton St., Hoboken, N. J.

\*Hyde Windlass Co., Bath, Me.

Michigan Wheel Co., Grand Rapids, Mich.

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The International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

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Marine Products Co., 515 Lycaste Ave., Detroit 14, Mich.

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National Company, 61 Sherman St., Malden, Mass.

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

## RADIOTELEGRAPH

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

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Hudson American Corp., 25 West 43rd St., New York 18, N. Y.

Jefferson-Travis, Inc., 76 Ninth Ave., New York 11, N. Y.

Kaar Engineering Co., Palo Alto, Calif.

Radiomarine Corp. of America, 75 Varick St., New York 13, N. Y.

Sargent, Lord & Co., 42 Portland Pier, Portland, Me.

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The Maxim Silencer Co., 65 Homestead Ave., Hartford, Conn.

"Shipmate": Stamford Foundry Co., Stamford, Conn.

## REDUCTION GEARS

Auto Engine Works, Inc., 333 A. North Hamline Ave., St. Paul, Minn.

\*Snow-Nabstedt Gear Corp., Welden St., Hamden, Conn.

\*Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.

G. Walter Machine Co., 84 Cambridge Ave., Jersey City 7, N. J.

Western Gear Works, 2600 E. Imperial Highway, Lynwood, Calif.

## RUST PREVENTIVE

Sudbury Laboratory, Box 780, South Sudbury, Mass.

## SEAM COMPOUNDS

Standard Dry Wall Products, Box X, New Eagle, Pa.

## SHIPBUILDERS

Bethlehem Steel Co., Shipbuilding Division, East Boston 28, Mass.

Delaware Bay Shipbuilding Co., Inc., Leesburg, N. J.

\*Diesel Engine Sales Co., Inc., St. Augustine, Fla.

\*Liberty Dry Dock, Inc., Foot of Quay St., Brooklyn 22, N. Y.

\*Frank L. Sample, Jr., Inc., Boothbay Harbor, Me.

## SILENCERS

John T. Love Welding Co., 31 Wharf St., Gloucester, Mass.

The Maxim Silencer Co., 65 Homestead Ave., Hartford, Conn.

## STEERING GEAR

\*The Edson Corp., 49-51 D St., South Boston, Mass.

\*Sperry Gyroscope Co., Division of the Sperry Corp., Great Neck, N. Y.

## STERN BEARINGS

\*"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.

Hathaway Machinery Co., New Bedford, Mass.

## WHISTLES

Cunningham Mfg. Co., 4200 West Marginal Way, Seattle 6, Wash.

## WINCHES

Bodine & Dill (formerly Hettinger Engine Co.), Bridgeton, N. J.

Bromfield Mfg. Co., Inc., 246-256 Border St., East Boston 28, Mass.

Hathaway Machinery Co., New Bedford, Mass.

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\*American Steel & Wire Co., Rockefeller Bldg., 614 Superior Ave., Cleveland 13, Ohio

Bethlehem Steel Co., Bethlehem, Pa.

John A. Roebling's Sons Co., Trenton 2, N. J.

\*Wickwire Spencer Steel Division, Palmer, Mass.

## Sounding-Lead

(Continued from page 9)

Gulf area to such receiving points as New York, Philadelphia, etc., and the hearing on another case involving an express proposal to increase by 10% rates on oysters, clams, and scallops from Eastern points to some 42 States. These hearings have been postponed until January 29 in Chicago; immediately after the re-icing charge case.

## OYSTER INSTITUTE MEETING

At a special meeting in New York on September 22, the officers and directors of the Oyster Growers & Dealers Association agreed to continue the operation of the Institute along the lines pursued by the late Institute Director, Dr. Lewis Radcliffe. They appointed a three-member committee, consisting of Messrs. William R. Woodfield, chairman, Frank M. Miles, Otto J. Alletag and J. S. Darling (ex officio), to select a new director of the Institute.

Temporary arrangements have been made to continue operation of the Oyster Institute office at 5600-32nd St., N.W., Washington, D. C.

**FISH DUTIES** The Chinese Government has withdrawn from the General Agreement on Tariffs and Trade, and this action will result in certain duties on some fishery products reverting back to the pre-agreement duties. The increases in duties will become effective thirty days after a U. S. Presidential proclamation, which is expected to be released shortly.

The duty increases will affect all favored nations, not just China.

Increased from 15% to 25% ad valorem will be the duty on pickled or salted alewives, in immediate containers, not air tight, weighing with contents not more than 15 lbs. each. The duty will increase from 1c to 1¼c per pound on other fish, pickled or salted, (excluding salmon, cod, haddock, hake, pollock, cusk, herring, mackerel, and alewives), in bulk or in immediate containers, weighing with their contents more than 15 lbs. The duty on these other pickled or salted fish items, when the containers weigh not more than 15 lbs., will increase from 15% to 25% ad valorem.

## CONGRESSIONAL APPOINTMENT

Congressman Edward J. Robeson, Jr., of the First District of Virginia (successor to Congressman Bland) has been appointed a member of the House Merchant Marine and Fisheries Committee. Largely due to his efforts, the Fish and Wildlife Service has reversed its decision to close the Hampton, Va. office of the Market News Service and decided to continue operation of this office for at least another six months.

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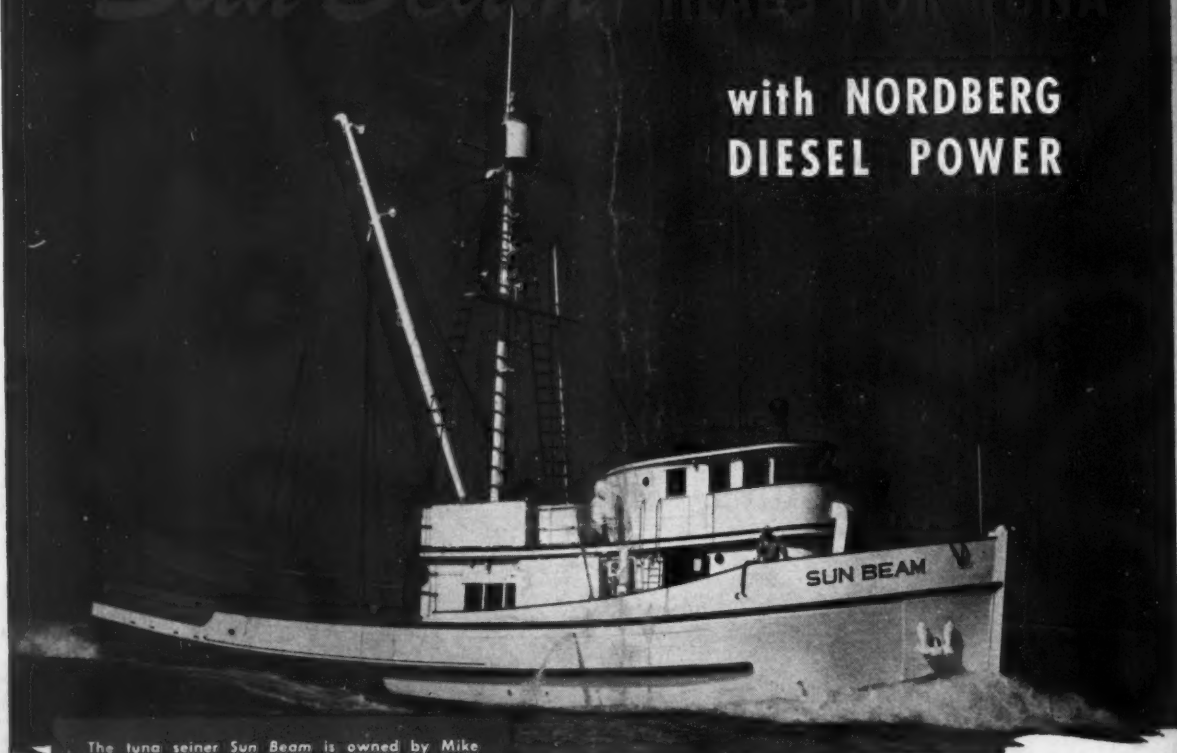
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